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ABSTRACT

This bulletin, number 41, provides an inventory of abstracts of ongoing or recently completed research studies relating to children. In addition, Bulletin 41 contains a bibliography on children and television and television advertising which updates previous ERIC Clearinghouse on Elementary and Early Childhood bibliographies on the subject. The bibliographic sources include ERIC documents, journal articles, books, reports, and conference papers. Citations are entered under the following categories: long-term research, growth and development, special groups of children, the child and the family, socioeconomic and cultural factors, educational factors and services, social services, and health services. Only research reported between March 1978 and August 1978 is included in this issue of the Bulletin. (Author/RH)

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Research Relating to Children

Bulletin 41

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NOTES: ***Research Relating to Children*** is prepared under the direction of Lilian G. Katz, Ph.D., Director, ERIC Clearinghouse on Early Childhood Education. Investigators who wish to submit abstracts of their research projects should address correspondence to:

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PREFACE

Research Relating to Children, Bulletin 41 includes reports of research in progress or recently completed research. With the exception of the section on Long-Term Research, it does not repeat studies included in ***Bulletins 1*** through ***40***, even though they are still in progress. This issue, therefore, does not reflect all research relating to children, but only research reported to us between March 1978 and August 1978.

In addition to reports of current research, ***Bulletin 41*** contains ***Children and Television and Television Advertising: A Bibliography,*** which updates previous ERIC Clearinghouse on Early Childhood Education Bibliographies on the subject. The bibliographic sources include ERIC documents, journal articles, books, reports, and conference papers that we hope you will find useful.

Publication references and plans are cited in the abstracts of research in the bulletin. The Clearinghouse, however, does not maintain information on the publications of the investigators. If you wish to obtain further details about any of the projects, please check professional journals in the appropriate field or write directly to the investigator.

We wish to thank investigators who have submitted reports of their research and those who have informed us of other studies. We wish to acknowledge the valuable assistance of the Social Research Group, George Washington University and the foundations that have provided us with information about their research grants.

Lilian G. Katz, Ph.D.
Director
ERIC Clearinghouse on Early Childhood Education

To Research Investigators:

This publication is only as complete as you are willing to make it. On page 215 you will find a form for reporting your current research. On page 219 you will find a form to let us know of other investigators who are working in the field. Please let us hear from you.

Research Relating to Children
805 West Pennsylvania Avenue
Urbana, Illinois 61801

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CHILDREN AND TELEVISION AND TELEVISION ADVERTISING: A BIBLIOGRAPHY

This selective bibliography on children and television is divided into two sections: (1) Children and Television and(2) Children and Television Advertising.

Citations of ERIC documents (denoted by ED numbers) and some journals were retrieved from the ERIC Data Base. Books and journal articles are available in public libraries. ERIC documents may be ordered from:

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ERIC studies may be ordered on microfiche (MF) or hard copy (HC). To read MF (a transparent film card), use a microfiche reader available in most libraries. HC is a photocopy of the original document.

Major descriptors (marked with asterisks) and minor descriptors appear under some citations. Descriptors with asterisks denote the document's major subject matter; terms without asterisks suggest topics of lesser import that are covered in the document.

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Prasad, V. Kanti ***et al.*** Mediating role of parental influence in children's response to TV commercials: An exploratory study. August 1977, 20 pp. ED 145 937.

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Consumer Behavior, School Age Children, TV Advertising

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Wackman, Daniel B. Children's information processing of TV advertising. September 1976, 19 pp. ED 130 775.

*Age Differences, *Cognitive Development, *Cognitive Processes, Commercial TV, Consumer Protection, *Developmental Stages, *Elementary Education, Elementary School Students, Kindergarten Children, Research, Socialization, *TV Commercials

Wackman, Daniel B. and Wartella, Ellen. A review of cognitive development theory and research and the implication for research on children's responses to TV. ***Communication Research,*** April 1977, 4(2), 203-224.

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Zuckerman, Paul ***et al.*** Children's viewing of TV and recognition memory of commercials. ***Child Development,*** March 1978, 49(1), 96-104.

Attention, Elementary Education, *Elementary School Students, *Memory, *TV Commercials, TV Research, *TV Viewing

LONG-TERM RESEARCH

Note: The reports in this section concern research programs that are continuous.

41-AA-1 LONGITUDINAL STUDY OF CHILD GROWTH AND DEVELOPMENT

Investigator(s): Frank Falkner, M.D., F.R.C.P., Director; Alexander F. Roche, M.D., Ph.D., Chief, Section on Physical Growth and Genetics; and Robert McCall, Ph.D., Chief, Section on Perceptual/Cognitive Development, Fels Research Institute for the Study of Human Development, 800 Livermore Street, Yellow Springs, Ohio 45387.

Purpose: To conduct a multidisciplinary study of children whose health, growth, psychological development, and environment have been studied since birth, with prenatal and genetic information; and to determine normative patterns of growth and development in human subjects.

Subjects: Over 800 subjects: from present infants to adults with their children in study. The subjects are healthy, from rural and urban areas, and from upper-lower to middle class backgrounds.

Methods: A multidisciplinary longitudinal study is being conducted with regular visits and use of appropriate analysis and computer methodology.

Duration: 1930-continuing.

Cooperating group(s): (1) Public Health Service, U.S. Department of Health, Education, and Welfare. (2) National Science Foundation. (3) Samuel S. Fels Fund. (4) U.S. Air Force.

Publications: Information is available from the investigators on approximately 1,022 publications that have been completed to date.

41-AA-2 DEVELOPMENT OF BUDGETS FOR CLOTHING AND HOUSEHOLD TEXTILES

Investigator(s): Virginia Britton, Ph.D., Home Economist, Consumer and Food Economics Institute, Agricultural Research Service, U.S. Department of Agriculture, Federal Center Building No. 1, Hyattsville, Maryland 20782.

Purpose: To develop and update current household clothing budgets taking into account known physiological and sociopsychological needs, clothing habits, income, and other resources of various population groups, and the prices and availability of clothing items.

Subjects: 12,000 children in 6,000 families with husband and wife and one to five children, but with no other persons living in the home.

Methods: Data were gathered from the 1960-61 Survey of Consumer Expenditures by the Bureau of Labor Statistics and the U.S. Department of Agriculture. Budgets for children were computed using regression methods for three economic levels of the USDA food plans – economy, low cost, and moderate cost. Separate clothing budgets were computed for boys and girls categorized by age, region, and urbanization. Budgets will be published as total expenditures for children's clothing (updated to current price levels) and in garment equivalent units.

Findings: Budget costs for boys tended to equal comparable budgets for girls at the economy level. However, at higher budget levels, boys' costs were substantially less than girls' budgets. This was especially true for older children. Cost differences between clothing budget levels were substantially greater than between food plans, reflecting the greater elasticity of clothing expenditures. The majority of farm budgets and rural non-farm budgets was about equal to the comparable urban budgets.

Duration: 1962-continuing.

Publications: Britton, V. Clothing budgets for children from the USDA: Annual costs at three levels in four regions. ***Home Economics Research Journal,*** March 1973, 1(3), 173-184. (Reprints are available from: Sales Office, American Home Economics Association, 2010 Massachusetts Avenue, N.W., Washington, D.C. 20036. Price $1.00.)

41-AA-3 CHILD HEALTH AND DEVELOPMENT STUDIES

Investigator(s): Bea J. van den Berg, Ph.D., Research Pediatrician, School of Public Health, University of California, Berkeley, California 94720; Stephen Thomas, M.D., Director, Department of Obstetrics and Gynecology; and Edgar Schoen, M.D., Director, Department of Pediatrics, Kaiser Foundation Hospital, Oakland, California 94611.

Purpose: To investigate the relationships of biologic, genetic, and medical and environmental factors in the parents (including events in pregnancy, labor, and delivery) to the normal and abnormal development of the offspring; and to investigate the relationships of these factors to pregnancy loss in the form of early fetal death, perinatal mortality, infant and childhood mortality, and to incidence of congenital anomalies, to growth and morbidity patterns in infancy and childhood, and to cognitive attainment, behavioral development, and physical characteristics at ages 5 and 10 years.

Subjects: Members of the Kaiser Foundation Health Plan (a prepaid medical health plan) who reside in the San Francisco-East Bay Area.

Methods: The method of study is longitudinal for both mother and child. In addition to information obtained specifically for the studies, the medical records for the gravida and child provided information on illnesses, injuries, and drugs. A special interview and developmental examination were given the child on his 5th birthday and to a large sample of children when they were ages 9 to 11. These include vision, hearing, speech, and tests of cognitive ability. It is planned to extend the observations with a follow-up examination of a subcohort of about 2,000 mothers and their children when the latter are about 16 years old. An epidemiological research project is in process, aimed at the identification of precursory factors for high blood pressure in young persons.

Duration: July 1959-continuing.

Publications: Copies of a publication list and reprints are available from: Child Health and Development Studies, 3867 Howe Street, Oakland, California 94611.

41-AA-4 THE BERKELEY, CALIFORNIA GROWTH STUDY

Investigator(s): Dorothy H. Eichorn, Ph.D., Research Psychologist, Institute of Human Development, University of California, Berkeley, California 94720.

Purpose: To study the mental and physical growth of normally healthy persons from birth to the present.

Subjects: 60 full-term, healthy newborns, born in Berkeley hospitals from 1928 to 1929 of white, English-speaking parents; and 140 offspring of these subjects, ages birth to 20, seen irregularly.

Methods: The same data, appropriate for age, were collected for the subjects and their offspring. Beginning in the first week of life, tests of mental and motor development, pediatric examinations, and interviews were conducted at frequent intervals during growth. At all visits, inquiries were made concerning current health and recent illnesses. Anthropometrics, body photographs, and skeletal X-rays were taken at most ages. Socioeconomic data were collected. Studies of the physical aspects of growth include analyses that compare health histories with physical growth and with skeletal maturation. Emotional and other personality variables are being studied for consistency, and in various interrelations with maternal behavior in infancy, birth histories, socioeconomic status, and intellectual and physical growth.

Duration: 1928-continuing.

Publications: (1) *American Psychologist*, 1968, 23(1), 1-17. (2) *Monograph of the Society for Research in Child Development*, 1963, 28. (3) Bayer, Leona and Bayley, Nancy, *Growth diagnosis: Selected methods for interpreting and predicting physical development from one year to maturity*. Chicago: University of Chicago Press, 1959.

41-AA-5 GROWTH AND PSYCHOPHYSIOLOGICAL PATTERNS IN INFANCY

Investigator(s): Wagner H. Bridger, M.D., Associate Professor of Psychiatry; and Beverly Birns, Ph.D., Assistant Professor of Psychology, Albert Einstein College of Medicine, Yeshiva University, Bronx, New York 10461.

Purpose: To investigate the origins and course of development of individual differences in neonates.

Subjects: Normal, healthy, full-term babies, 2 to 5 days old, born at Bronx Municipal Hospital Center.

Methods: A neonatal behavioral profile, which was established in previous studies, will be used. The profile includes behavioral and heart rate ratings on excitation, soothing, feeding, sleep, and nonstimulus periods of observation. Neonates will be followed at ages 2 weeks, and 1, 2, 3, and 4 months to measure the stability of early appearing traits and their relation to later behaviors. Data will be analyzed with respect to stability of early appearing behaviors and the relationship between neonatal behavior and maternal and birth history.

Duration: 1966-continuing.

Cooperating group(s): National Institute of Mental Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

Publications: (1) Newton, Grant and Levine, Seymour (Eds.) ***Early experience and behavior: Psychobiology of development.*** Springfield, Illinois: Charles C Thomas, 1968. (2) ***Psychosomatic Medicine,*** 1966, 28, 316.

41-AA-6 STUDIES OF INTELLECTUAL DEVELOPMENT AND ORGANIZATION

Investigator(s): Lloyd G. Humphreys, Ph.D., Professor of Education and Psychology, 425 Psychology Building, University of Illinois, Champaign, Illinois 61820.

Purpose: To help understand the development and organization of human abilities.

Subjects: The sample includes male and female subjects from grade school to adult.

Methods: A variation on the basic model of the cross-lagged panel correlation methodology involving multiple correlations has been tried and appears to have promise. The basic methodology will also be investigated and the result obtained from its use will be compared to the factor structure of the various measures. Before this can be done, however, an appropriate methodology for the factor analysis of the growth data must be developed. Three possible approaches will be employed. A somewhat independent project involves a factor analysis of the school means obtained in Project TALENT. The purpose is to investigate how naturally occurring social selection operates primarily on the general factor in human abilities and that group factors will be poorly defined in the correlations based upon school means. The Graduate Record Examination will be used as criterion for predicting grade point average in undergraduate and graduate students as a follow-up to previous research on predictability of academic grades over 1 to 4 years.

Duration: 1971-continuing.

Cooperating group(s): (1) Spencer Foundation. (2) Educational Testing Service. (3) National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare. (4) American Institutes for Research.

Publications: A list of publications is available from the investigator.

41-AA-7 NEW RADIOGRAPHIC STANDARDS OF REFERENCE FOR SKELETAL DEVELOPMENT OF CHILDREN AND STANDARDS IN PREPARATION

Investigator(s): S. Idell Pyle, Ph.D., Research Associate in Anatomy, School of Medicine, Case Western Reserve University, Cleveland, Ohio 44106; William W. Greulich, Ph.D., Research Biologist, National Institute of Child Health and Human Development, Bethesda, Maryland 20014; and

staff of the National Center for Health Statistics involved in the National Health Survey, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington, D.C. 20201.

Purpose: To develop radiographic standards of reference for skeletal development of children to provide a basis for identifying maturity levels of growing bones in the hands, elbows, shoulders, hips, knees, and feet of children and youths according to the shapes of the bone shadows in an X-ray film.

Subjects: Approximately 1,000 healthy individuals in Cleveland and Boston.

Methods: The bone shadows in an X-ray film display a modal rate of growth of each bone by illustrating regularly occurring osseous features which develop in series in the surface of the bone cortex as it calcifies. A reference standard consists of films arranged as a series to show sequential osseous features which are alike in males and females. It is an instrument for measuring the skeletal maturity level of children. Films of the subjects, covering the full span of growth from birth to adulthood, have been used to prepare standards. A standard of reference for joints in the upper extremity is in preparation, with the section on the hand and wrist showing the application of cardinal maturity indicators of individual bones to handwrist bones which are anomalous in the number of their bone growth centers. For published standards, see publication references listed below.

Duration: 1948-continuing.

Cooperating group(s): Bolton-Brush Growth Study Center, Case Western Reserve University, Cleveland; Department of Maternal and Child Health, Harvard University School of Public Health, Boston; National Center for Health Statistics, Rockville, Maryland; Departments of Pediatrics and Endocrinology, Henry Ford Hospital, Detroit; Merrill-Palmer Institute, Detroit; Department of Education, Eastern Michigan University, Ypsilanti.

Publications: (1) Greulich, W.W. and Pyle, S.I. ***A radiographic atlas of skeletal development of the hand and wrist*** (2nd Ed.) Stanford, California: Stanford University Press, 1959. (2)Hoerr, N.L., Pyle, S.I.; and Francis, C.C. ***A radiographic atlas of skeletal development of the foot and ankle*** (1st Ed.) Springfield, Illinois: Charles C Thomas, 1962. (3) Pyle, S.I. and Hoerr, N.L. ***A standard of reference for the growing knee*** (2nd Ed.) Springfield, Illinois: Charles C Thomas, 1969. (4) Pyle, S.I.; Waterhouse, A.M.; and Greulich, W.W. ***A standard of reference for the growing hand and wrist*** (1st Ed.) Cleveland, Ohio: The Press of Case Western Reserve University, 1971.

41-AA-8 METHODS IN CHARACTER DEVELOPMENT

Investigator(s): Ernest M. Ligon, Ph.D., Director; and staff, Union College Character Research Project, 10 Nott Terrace, Schenectady, New York 12308.

Purpose: To develop more effective methods in character development in cooperation with families and character training agencies. ("Character" is defined in terms of three dimensions: philosophy of values, breadth of social vision, and strength of purpose.)

Subjects: Children and families throughout the United States. The families belong to churches, YMCAs, and schools but participate in the study as individual families.

Methods: Procedures of the research are based on action research, in which the participants cooperate with the laboratory and use methods of coscientist research. Open-ended reports on research goals constitute the basic body of research data. An analysis of these data serves as the basis for the development of new procedures and for the scientific reports that are published concerning it.

Findings: Reports have been prepared concerning hypotheses tested in the home and character building agencies. Most of the findings relate to the home, learning, decision making, and methods for character development, plus descriptions of age level potentials, especially for decision making.

Duration: 1936-continuing.

Cooperating group(s): Lilly Endowment, Inc.

Publications: Catalog: ***Attitude Education and Character Development,*** which lists 44 publications and includes a price list, is available from the investigator.

41-AA-9 LONGITUDINAL GROWTH STUDIES OF CHILDREN WITH CRANIOFACIAL BIRTH DEFECTS

Investigator(s): Samuel Pruzansky, D.D.S., Director, Center for Craniofacial Anomalies, Medical Center, University of Illinois, P.O. Box 6998, Chicago, Illinois 60680.

Purpose: To study the epidemiology, genetics, morphology, physiology, and postnatal development of children; and to plot the natural history of children with craniofacial birth defects.

Subjects: Over 3,000 subjects, males and females, from infancy to adulthood.

Methods: The subjects were initially studied as infants. Procedures included roentgenocephalometry, tomography, dental casts, and photographs. Speech and hearing, psychosocial, and pediatric evaluations supplied additional information.

Findings: Patterns of growth have been delineated that are useful in clinical management. Some conditions have been shown to get worse; some show spontaneous improvement; and others remain unchanged. Syndrome-specific cranial morphologies have been described and genetic significance has been described.

Duration: 1949-continuing.

Cooperating group(s): (1) Illinois State Pediatric Institute. (2) Division of Services for Crippled Children, University of Illinois. (3) Cook County Children's Hospital. (4) Division of Research; Maternal and Child Health Services; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare. (5) National Institute of Dental Research; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

Publications: *Cleft Palate Journal*, 1971, 8, 239. A list of articles in journals of dentistry, medicine, public health, speech and hearing, and psychology is available from the investigator.

41-AA-10 NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS (NAEP)

Investigator(s): J. Stanley Ahmann, Ph.D., Project Director; Roy Forbes, Ed.D., Project Director; and George Johnson, Ph.D., Associate Project Director, National Assessment of Educational Progress, 700 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80203.

Purpose: To obtain census-like data on the knowledge, skills, concepts, understandings, and attitudes possessed by young Americans; and to measure the growth or decline in educational attainments that occur over time in the 10 learning areas assessed.

Subjects: 27,000 subjects annually in each age group: 9, 13, and 17 (including high school dropouts and early graduates); and 5,000 young adults annually, ages 26 to 35.

Methods: The National Assessment of Educational Progress is an annual national survey that assesses 10 learning areas: art, career and occupational development, citizenship, literature, mathematics, music, reading, science, social studies, and writing. Three areas have been assessed twice: science (1969-70 and 1972-73); writing (1969-70 and 1973-74); and reading (1970-71 and 1974-75). The four age levels assessed were selected to correspond to the end of primary, intermediate, secondary, and postsecondary education. A national probability sample of approximately 2,500 to 2,600 individuals per group administered package, and a sample of 2,100 to 2,200 individuals per individually administered package are assessed annually. The samples are designed to allow NAEP to estimate the performance of the population for that age level. Students in school are assessed in small groups up to 12, or in some cases, in individual interviews. Paper and pencil questions, discussions, and actual tasks to perform are included among the exercises. Adults are interviewed individually at home, and 17-year olds who are out of school also respond to exercises individually. Results are reported for about 50 percent of the exercises given each year and are stated in percentages of people responding correctly or incorrectly. Results are reported nationally and for geographic region, size and type of community, age, sex, race, and parental education.

Duration: 1969-continuing.

Cooperating group(s): (1) National Center for Educational Statistics; U.S. Office of Education; Education Division; U.S. Department of Health, Education, and Welfare. (2) Carnegie Corporation. (3) Ford Foundation's Fund for the Advancement of Education. (4) Research Triangle Institute. (5) Measurement Research Center. (6) Education Commission of the States.
Publications: The National Assessment Publications List is available from: Education Commission of the States, 300 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80203.

41-AA-11 COLLABORATIVE STUDIES IN CEREBRAL PALSY AND OTHER NEUROLOGICAL AND SENSORY DISORDERS OF INFANCY AND CHILDHOOD

Investigator(s): Joseph S. Drage, M.D., National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014.
Purpose: The Collaborative Perinatal Project (CPP) is a longitudinal multidisciplinary research effort which seeks leads to the etiologies of cerebral palsy, mental retardation, learning disorders, congenital malformations, minimal brain dysfunction, convulsive disorders, and communicative disorders through studies which relate the events, conditions, and abnormalities of pregnancy, labor, and delivery to the neurological and mental development of the children of these pregnancies.
Subjects: During a period from 1959 through 1966, detailed research data were obtained from 50,000 women during pregnancy, labor, and delivery. The children born to these 50,000 women during their participation in the CPP have been examined at specific intervals up to the child's 8th birthday to identify abnormal conditions which might limit the child's ability to reach maximum developmental potential.
Methods: A comprehensive analysis of the data will investigate the complex interactions between the child's condition and the antecedent factors which may have contributed to the condition. The analysis of this data is underway within the National Institutes of Health, within other governmental agencies, and under contract with teams of investigators at medical centers outside of government. The Perinatal Research Branch and the National Institute of Neurological and Communicative Disorders and Stroke have the responsibility for monitoring, coordinating, and administering the overall research effort. The goal of this effort is to make a series of publications available to the research community and the general public. The projected completion of this analysis is June 30, 1976. The data for the CPP were collected at 12 major medical centers in the United States.
Duration: 1956-continuing.
Cooperating group(s): Charity Hospital, New Orleans, Louisiana; Johns Hopkins University School of Medicine, Baltimore, Maryland; Boston Lying-In Hospital, Children's Medical Center, and Harvard University (Warren Anatomical Museum), Boston, Massachusetts; University of Minnesota Medical School, Minneapolis, Minnesota; Columbia-Presbyterian Medical Center, New York, New York; Children's Hospital of Buffalo, Buffalo, New York; University of Oregon Medical School, Portland, Oregon; Children's Hospital of Philadelphia and Pennsylvania Hospital, Philadelphia, Pennsylvania; Brown University, Providence, Rhode Island; University of Tennessee Medical School, Memphis, Tennessee; Medical College of Virginia, Richmond, Virginia.
Publications: (1) Niswander, K.R. ***et al. The women and their pregnancies, 1972.*** (The Collaborative Perinatal Study of the National Institute of Neurological and Communicative Disorders and Stroke.) Available from: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Order Stock No. 1749-00038; price, $10.00. (2) A bibliography is available from the investigator.

41-AA-12 STUDY OF PERSONALITY ORIENTED DEVELOPMENT BY THE TWIN INTRAPAIR COMPARISON METHOD

Investigator(s): William Pollin, M.D., Chief; Donald Cohen, M.D., Clinical Associate; and Eleanor Dibble, Research Social Worker, Section on Twin and Sibling Studies, Adult Psychiatry Branch, National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education and Welfare, Bethesda, Maryland 20014.
Purpose: To understand the contributions of genetic, constitutional, and environmental factors to social, emotional, and cognitive development during the first years of life; specifically, to explicate the factors that underlie the emergence of individuality, using twins and triplets as subjects.
Subjects: Twins and triplets, from the prenatal period through elementary school age.
Methods: The central methodological principle emphasizes the effort to define precisely developmental differences within infant and childhood MZ twin pairs, and then search for the determinants of such differences. In the longitudinal study, parents are interviewed as soon as the diagnosis of a twin pregnancy is made. Neurological, pediatric, and developmental assessments are performed at birth and at 3- to 6-month intervals during the first years of life. The parents are interviewed at the same intervals about the children's development and family history. In the preschool period, the children receive standardized psychological testing, are observed in a standardized nursery school setting, and are administered projective psychological testing. Children and families are visited at home and are also seen in structured office settings. In cross-sectional studies, children are seen for developmental evaluation, psychological assessment, and observations of free play; and their parents are interviewed. The value of questionnaire techniques is being investigated. A general research question relates to the way in which constitutional differences in the children elicit different types of parenting, and the ways in which differential parental behavior shapes the emergence of personality differences in children.
Duration: 1967-1980.

41-AA-13 PRIMARY MENTAL HEALTH PROJECT

Investigator(s): Emory L. Cowen, Ph.D., Professor, Department of Psychology, and Director; D.A. Dorr, Ph.D., Research Coordinator; L.D. Izzo, M.A., Chief Psychologist; and M.A. Trost, M.A., Chief Social Worker, Primary Mental Health Project, University of Rochester, River Campus Station, Rochester, New York 14627.
Purpose: To detect and to prevent school adjustment problems.
Subjects: More than 30 schools in Rochester, New York city and suburban areas, as well as 250 or more schools in 35 to 40 school districts around the world. In the past few years, intensive helping services, averaging about 30 contacts per child, have been brought to more than 1,000 children. Ninety percent of these children are in kindergarten to 3rd grade, consistent with the project's preventive thrust. Approximately one-third of the children come from city schools; two-thirds, from country schools. Although the range of individual problems is enormous, all children have in common the presence of moderate to serious school adjustment problems.
Methods: Using carefully developed screening and early detection methods, the staff of the Primary Mental Health Project (PMHP) identifies primary grade children with early school adjustment problems. Once identified, the children are provided with immediate, extensive, and effective helping services. Carefully selected, trained nonprofessional child aides, working under close professional supervision, increase tenfold the number of children who are helped. The Project staff handles both educational and behavioral problems (e.g., aggression or withdrawal) that interfere with effective learning. The research includes studies on training nonprofessionals, evaluation of programs, process analyses, selection-process relations, selection-outcome relations, and process-outcome relations. Between 20 and 30 different research instruments and assessment procedures are used.

Findings: PMHP has been carefully researched since its inception. Several external reviewers have described it as the most extensively researched school mental health project in history. To date, some 18 separate project outcome studies, many summarized in a recent book on PMHP (see publications), have been carried out. These studies offer strong support for the program's effectiveness in terms both of children's improved educational achievement and behavioral adjustment. Moreover, program gains have been enduring rather than short-term.

Duration: 1958-continuing.

Cooperating group(s): (1) National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare. (2) New York State Department of Education.

Publications: (1) Cowen, E.L. The community as context. In M.P. Feldman and J. Orford (Eds.), ***The social psychology of psychological problems.*** Chichester, England: John Wiley and Sons, 1979. (2) Cowen, E.L. and Gesten, E.L. Evaluation of community mental health programs. In M. Gibbs ***et al.*** (Eds.), ***Community psychology: Theoretical and empirical approaches.*** New York: Gardner Press, 1979. (3) Cowen, E.L.; Gesten, E.L.; and Wilson, A.B. The Primary Mental Health Project (PMHP: Evaluation of current program effectiveness. ***American Journal of Community Psychology,*** 1979, 7. (4) Gesten, E.L.; Cowen, E.L.; and Wilson, A.B. Correlates of teacher rated competence in a school based mental health program. ***American Journal of Community Psychology,*** 1978, 6. (5) Cowen, E.L. and Gesten, E.L. Program evaluations of the Primary Mental Health Project (PMHP): Research problems and findings. In W. Neigher ***et al.*** (Eds.), ***CMHC program evaluation source book: Development project.*** Washington, D.C., U.S. Government Printing Office, 1978. (6) A list of over 100 publications is available from the investigators.

41-AA-14 LANGUAGE ACQUISITION IN THE CONTEXT OF THE DEVELOPMENT OF BEHAVIOR AND INTERACTION

Investigator(s): Margaret Bullowa, M.D., Researcher, Speech Communication Group, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.

Purpose: To find the steps by which early stages of the child's language development take place.

Subjects: Four firstborn children from white, English-speaking, middle class families.

Methods: Each child was observed from birth for at least 30 months at home at weekly intervals. On each visit a half hour continuous record was made on tape and film. An observer using a shielded microphone dictated a simultaneous description of ongoing behavior and interaction to supplement the film taken by a robot camera. A timing signal was placed on the tape and film every 5 seconds. (The tape and film from an observation may be synchronized during playback in the laboratory.) In addition, an independent team that consisted of a pediatrician and a developmental psychologist visited each baby's home once a month to assess other aspects of maturation and development. Indexes to sound and transcripts were made from the tapes to permit rapid search. Tapes are analyzed by linguists interested in phonological, semantic, and syntactic features. Synchronized tape and film is studied by linguists and by the principal investigator, who is interested in the communicative behavior of which the vocalization forms a part.

Findings: The most significant finding is the apparent obligatory relationship between the child's vocal sound production and actions with the same meaning in early ***performative sentences.*** Such sentences are used by the child to communicate messages when he is showing something to someone, when he is greeting someone, etc. Another finding is the spontaneous appearance of sentences with topic-comment construction in the child's speech even though parents rarely use this construction. (The construction is not characteristic of adult American English.)

Duration: Pilot study, 1959-1965; present study, 1965-continuing.

Cooperating group(s): National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

Publications: (1) ***Journal of Child Psychiatry,*** 1964, III(1), 53. (2) ***Monographs of the Society for Research in Child Development,*** 1964, 29(1), 101-114. (3) ***Language and Speech,*** 1964, 7(2), 107-111. (4) ***Quarterly Progress Report of the Research Laboratory of Electronics,*** 1966, 81, 181-186. (5) ***Lingua,*** 1967, 19(1), 1-59. (6) ***Foundations of Language,*** 1967, 1, 37-65.(7) Reibel, D.A. and Schane, S.A. (Eds.) ***Modern studies in English.*** Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969. Pp. 422-447. (8) Bar-Adon, A. and Leopold, W.F. (Eds.) ***Child language: A book of readings.*** Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971. (9) ***Journal of the American Academy of Child Psychiatry,*** 1971, 10(1), 124-135. (10) ***Quarterly Progress Report of the Research Laboratory of Electronics,*** M.I.T., 1971. No. 100. (11) Bullowa, M. From communication to language. Presented at the International Symposium on First Language Acquisition, Florence, Italy, 1972 (mimeo). (12) Bullowa, M. and Putney, E. A method for analyzing communicative behavior between infant and adult from film. Presented at a meeting of the International Society for the Study of Behavioral Development, Ann Arbor, Michigan, 1973 (mimeo). (13) Bullowa, M. Non-verbal communication in infancy. Presented at the 1st Congress of the International Association for Semiotic Studies, Milan, Italy, 1974 (preprint). (14) Gruber, J.S. Correlations between the syntactic constructions of the child and of the adult. In C.A. Ferguson and D. Slobin (Eds.), ***Studies of child language.*** Holt, Rinehart and Winston, 1973. Pp. 440-445. (15) Bullowa, M. When infant and adult communicate, how do they synchronize their behaviors? In A. Kendon ***et al.*** (Eds.), ***Organization of behavior in face-to-face interaction.*** Mouton, 1975. Pp. 97-129. (16) Bullowa, M. ***et al.*** Infant vocalization: Communication before speech. In T.R. Williams (Ed.), ***Socialization and communication in primary groups.*** Mouton, 1975. Pp. 243-281. (17) Bullowa, M. A matrix for language. Presented at the 21st Annual Conference of the International Linguistic Association, New York City, March 1976 (mimeo). (18) Bullowa, M. From communication to language. ***International Journal of Psycholinguistics*** (in press). (19) Bullowa, M. Infants as conversational partners. In T.F. Myers (Ed.), ***The development of discourse and conversation.*** Edinburgh University Press (in press). (20) Bullowa, M. From performative act to performative utterance. In S.K. Ghosh (Ed.), ***Biology, language and human behavior.*** University Park Press (in press).

41-AA-15 THE HARVARD PRESCHOOL PROJECT

Investigator(s): Burton L. White, Ph.D., Director; Jean Watts, Ph.D., Co-Director; and Barbara Kaban, M.A., The Harvard Preschool Project, Laboratory of Human Development, Graduate School of Education, Harvard University, 418 Larsen Hall, Appian Way, Cambridge, Massachusetts 02138.

Purpose: To trace the development of educability and competence in children during the first 6 years of life; and simultaneously to trace the role of experience in such development.

Subjects: Presently, 32 normal children, ages 12 to 32 months, of both sexes, half of whom were selected because they exhibited potentials to develop high degrees of general competence during the second and third years of life; while the other children seemed likely to develop a considerably lower level of competence.

Methods: The work in progress constitutes a longitudinal natural experiment. Data are collected by home observation and testing of the children on the average of 2 hours per week. One observational technique consists of tape recordings in which the observer describes the child's activities. The data are then coded onto forms using instruments developed for the project. Another technique involves a checklist record of behavior. Tests of language and cognitive development are administered regularly. Factors are measured including stream of experience, the child's competencies, and salient environmental influences.

Findings: Analysis of preliminary data indicates that the observation instruments are monitoring the development of competence in promising ways. Further indications of how childrearing practices influence the process are becoming clear. The mother, or substitute, usually through indirect action, is seen as the major environmental influence on the development of competence. A longitudinal experiment will be initiated this year. (See ***Research Relating to Children, Bulletin 22,*** May-December 1967, Study 22-DA-3, p. 16.)

Duration: September 1965-continuing.
Cooperating group(s): (1) U.S. Office of Economic Opportunity. (2) Carnegie Corporation, New York. (3) Head Start; Office of Child Development; Office of Human Development; U.S. Department of Health, Education, and Welfare.

41-AA-16 LEARNING OF INCENTIVE VALUE IN CHILDREN

Investigator(s): Jum C. Nunnally, Ph.D., Professor, Department of Psychology, Vanderbilt University, Nashville, Tennessee 37203.
Purpose: To study the learning of incentive value in children through the use of reward conditioning.
Subjects: Elementary school children, ages 7 to 11.
Methods: Neutral objects (usually nonsense syllables) are associated with receipts of reward, nonreward, and loss of reward in various types of research designs. The amounts and kinds of condition reward value are measured in relation to verbal evaluation, reward expectancy, choice behavior, and measures of selective attention.
Findings: Various consistent effects have been found on the dependent measures, and the research paradigms have been able to differentiate many treatment conditions concerned with secondary rewards.
Duration: 1963-continuing.
Cooperating group(s): Office of Education; U.S. Department of Health, Education, and Welfare.
Publications: (1) Rileigh, K.K. and Nunnally, J.C. A new measure of semantic appraisal for studies of secondary rewards. ***Psychonomic Science,*** 1970, 18, 203-205. (2) Wilson, W.H. and Nunnally, J.C. A naturalistic investigation of acquired meaning in children. ***Psychonomic Science,*** 1971, 23, 149-150.

41-AA-17 CHILDHOOD PSYCHOSIS

Investigator(s): Rudolf Ekstein, Ph.D., Director, Childhood Psychosis Project; Seymour W. Friedman, M.D., Director, Clinical Services; Peter Landres, M.D., Staff Psychiatrist; Beatrice M. Cooper, M.A., Senior Research Social Worker; and Joel Liebowitz, Ph.D., Clinical Research Psychologist, Reiss-Davis Study Center, 9760 West Pico Boulevard, Los Angeles, California 90035.
Purpose: To develop better diagnostic and treatment methods for childhood psychosis; and to investigate psychoanalytic methods of treatment, the use of support systems, and work with parents, collaborating agencies, schools, and hospitals.
Subjects: 10 children, ages 5 to 20.
Methods: Data were gathered through tape recordings of psychotherapy sessions, therapists' summaries of sessions, and repeated psychological tests. The use of ***distance*** as a psychological mechanism will be investigated. (See ***Research Relating to Children, Bulletin 18,*** March-December 1964, Study 18-L-36, p. 58; and ***Bulletin 20,*** October 1965-May 1966, Study 20-IA-1, p. 72.)
Duration: 1957-continuing.
Publications: (1) ***Children of time and space, of action and impulse.*** New York: Appleton-Century-Crofts, 1966. (2) ***The challenge: Despair and hope in the conquest of inner space.*** New York: Brunner/Mazel, 1971. (3) Ekstein, R. and Friedman, S.W. Do you have faith that I'll make it? ***Reiss-Davis Clinic Bulletin,*** 1971, 8(2). (4) Rubin, K. The flawed hammer. ***Reiss-Davis Clinic Bulletin,*** 1971, 8(2). (5) Cooper, B. The flawed triangle. ***Reiss-Davis Clinic Bulletin,*** 1971, 8(2). (6) Liebowitz, J.M. Transformation of the flaw – Re-evaluation via psychological testing. ***Reiss-Davis Clinic Bulletin,*** 1971, 8(2). (7) Ekstein, R. and Wax, D. Fusion and diffusion of memory and perception in childhood psychosis in relation to psychotherapeutic innovations. ***Reiss-Davis Clinic Bulletin,*** 1972, 9(2). (8) Ekstein, R.; Friedman, S.; and Caruth, E. The psychoanalytic treatment of childhood schizophrenia. In B.B. Wolman (Ed.), ***Manual of child psychopathology.*** New York: McGraw-Hill, 1972. Pp. 1035-1057.

41-AA-18 A SURVEY OF THE NUTRITIONAL STATUS OF BRITISH SCHOOL CHILDREN

Investigator(s): Judith Cook, M.B., B.Chem., Lecturer; Douglas Altman, B.Sc., Lecturer; W.W. Holland, M.D., F.F.C.M., Professor; and S.G. Topp, B.Sc., Dip.Stat., Lecturer, Department of Clinical Epidemiology and Social Medicine, School of Medicine, St. Thomas's Hospital, London S.E. 1, England; and A. Elliott, M.D., D.P.H., County Medical Officer, Kent County Council, Kent, England.

Purpose: To examine the dietary intake of school children and investigate its relationship to health and socioeconomic factors; and to explore the extent and nature of poor nutrition.

Subjects: 1,017 children, born between 1953 and 1955 or between 1958 and 1960, residing in and attending Local Authority schools in four areas in Kent, England. The sample was stratified by social class, family size, and weight. Higher sampling fractions were taken for children (1) from larger families, (2) from lower social classes, (3) with no fathers, and (4) with low weights, in order to have adequate numbers of subjects in those groups suspected of having the greatest likelihood of deficiency.

Methods: Field work for each child, conducted between September 1968 and March 1970, was comprised of a weighted diet record, a socioeconomic questionnaire, and a medical examination. The weighted diet record was kept for 1 week and was closely supervised by a trained field worker. The same field worker administered the socioeconomic questionnaire which elicited information on family structure, father's occupation, mother's education and working status, the child's health history and eating pattern, and the parents' heights. The medical examination, carried out by one of two medical officers, included a clinical assessment of the nutritional status of the child; measurements of height, weight, triceps and subscapular skinfold thickness, arm circumference, and peak expiratory flow rate. The medical examination also noted clinical evidence of vitamin deficiency.

Duration: 1968-continuing.

Cooperating group(s): Department of Health and Social Security.

Publications: (1) Cook, J. ***et al.*** A survey of the nutritional status of school children. Relation between nutrient intake and socioeconomic factors. ***British Journal of Preventive Social Medicine,*** 1973, 27, 91-99. (2) Topp, S.G.; Cook, J.; and Elliott, A. Measurement of nutritional intake among school children. ***British Journal of Preventive Social Medicine,*** 1972, 26, 106.

41-AA-19 GUIDANCE INSTITUTE FOR TALENTED STUDENTS

Investigator(s): Philip A. Perrone, Ph.D., Director; Charles Pulvino, Ph.D.; and James L. Lee, Ph.D., Associate Directors, Guidance Institute for Talented Students, University of Wisconsin, 1025 West Johnson Street, Madison, Wisconsin 53706.

Purpose: To develop and demonstrate procedures for the identification and longitudinal description of talented children and adolescents; to implement and evaluate guidance and educational practices; and to serve as a demonstration and development center for counseling, guidance, and planning activities in all cooperating schools.

Subjects: This has been a longitudinal sample now numbering 3,700 males and females, ages 14 to 30, from 90 Wisconsin school systems, whose average mental test scores are in the upper 3% to 5% of students in their age range and grade in school. Subjects have been selected using criteria designed to identify multipotential youths in grade 9. These criteria include aspects of the student's vocabulary, spoken and written communication, reading background, range of interests, school performance, creativity, and learning behavior. During the past year, research and demonstration efforts have extended into the elementary school and plans are underway to initiate a preschool program. Parent training/mentoring programs have been developed and are offered through University Extension. Considerable emphasis has been given to the study of creativity, self-control, and developing social skills.

Methods: Subjects meet at least twice a year with Institute staff and parents and teachers have at least one, and frequently two, conferences a year. At the high school level, students also visit the Madison campus once a year. Arranged activities include feedback interviews, visits to University classes and laboratories, conferences with University staff members in any area of interest, experiences with biofeedback programs, structured exercises in leadership training, decision making, and creative thinking. These activities are designed to (1) broaden students' horizons with respect to educational and vocational opportunities, (2) develop realistic self-concepts about their own strengths and interests, (3) foster plans for suitable educational programs, (4) discover methods for overcoming limitations, (5) encourage development of personal and academic strengths, and (6) provide counsel on matters that may influence the individual student's fullest development. Findings are interpreted and implications are considered with the student in individual counseling sessions. Institute staff teams (1) visit students' schools and hold conferences with the parents and teachers of each participating child to receive their input and to inform them about student characteristics which they may not recognize; (2) stimulate action to meet students' developmental needs; (3) facilitate communication among the parents, school, and student; and (4) discover points of view and other parental characteristics that affect the student's development. A written report regarding each student is presented to the student for review and final inputs, and, in turn, the report is shared with the faculty and parents. A summary report of all participants is also prepared citing programmatic needs for talented students. Inservice training sessions are held to discuss identification of specific students, suggestions to the school, and general principles for guidance and education for talented students. Objectives of these training sessions are (1) stimulation of and assistance with the process of identification of talented students; (2) encouragement and assistance in making special provision for the development of talented students, and stimulation to do so for other students; (3) provision of information about educational and vocational requirements and opportunities particularly applicable to talented students; (4) encouragement of innovation and experimentation in school procedures for talented students as well as for other students; and (5) demonstration of appropriate guidance services for students. Although there are difficulties in obtaining adequate control groups, some research studies have been done comparing Institute participants with other students matched on academic, familial, school, and community variables. In addition, comparisons of the effectiveness of two or more procedures for accomplishing a particular guidance goal have been made in other Institute research studies.

Findings: The Guidance Institute for Talented Students is a cooperative effort which has maintained direct, personal, longitudinal, and functional relationships between the University of Wisconsin and 3,700 top students, their parents, and their teachers throughout Wisconsin (see ***Research Relating to Children, Bulletin 22,*** May-December 1967, Study 22-QA-1, p. 83). More than 97% of all student participants who have graduated from high school have enrolled in higher education programs. Many have gone on to graduate and professional study. As a group, these young people have established a very outstanding record in college.

Duration: 1957-continuing.

Cooperating group(s): (1) Office of Education; Education Division; U.S. Department of Health, Education, and Welfare. (2) Ninety cooperating school systems in Wisconsin.

Publications: (1) Laboratory monograph: Research on the gifted and talented student, 1976. (2) Sanborn, M.P. and Niemiec, C.J. Identifying values of superior high school students. ***School Counselor,*** March 1971. (3) Bradley, R.W. and Sanborn, M.P. Ordinal position of high school students identified by their teachers as superior. ***Journal of Educational Psychology,*** 1969, 60(1), 41-45. (4) Mowsesian, R.; Heath, R.G.; and Rothney, J.W.M. Superior students' occupational preferences and their fathers' occupations. ***Personnel and Guidance Journal,*** November 1966. (5) Refer to ***Education Index*** for other publications related to this project.

41-AA-20 PANEL STUDY OF FAMILY INCOME DYNAMICS

Investigator(s): James N. Morgan, Ph.D., Program Director; and Greg Duncan, Ph.D., Study Director, Institute for Social Research, University of Michigan, P.O. Box 1248, Room 3063, Ann Arbor, Michigan 48106.

Purpose: To measure changes in economic well being and explain them by following a representative sample of families over time, monitoring their economic status, employment experiences, housing, transportation, food consumption, attitudes, and behavior patterns.

Subjects: A national probability sample oversampling lower income families but weighted to provide unbiased estimates. All individuals from the original 1968 sample of families are retained.

Methods: Families containing sample members are interviewed each year. Personal interviews were conducted during the first 5 years; currently families are contacted by telephone. The 1976 interview (9th year) included a supplemental interview with wives. The questionnaire used has a very detailed income sequence. An achievement motivation and a cognitive skills sentence completion test was included in 1972. Many attitude measures were included in the interviews during the first 5 years. Since the study follows children who leave parental homes, there are now 1,500 individuals who were children in 1968 and are now heads of households, for which there is information reported by parents in the early years of the study.

Duration: 1967-continuing.

Cooperating group(s): Office of the Assistant Secretary for Planning and Evaluation; U.S. Department of Health, Education, and Welfare.

Publications: ***Five thousand American families. Patterns of economic progress,*** Vols. 1-5. Ann Arbor, Michigan: Institute for Social Research, 1974-1977.

41-AA-21 ST. LOUIS BABY STUDY

Investigator(s): Thomas E. Jordan, Ed.D., Graduate Dean and Director of Research, Graduate School and Office of Research, University of Missouri, 8001 Natural Bridge Road, St. Louis, Missouri 63121.

Purpose: To describe developmental patterns of children; and to identify factors influencing physical and cognitive attainment.

Subjects: Of three cohorts of children the most important has been the second, a set of 1,008 babies born in St. Louis between Winter 1966 and Spring 1967.

Methods: This study incorporates data from biological, behavioral, and social information on the development from birth of 1,000 children. The cohort is comprised of children from families of all social classes, and ethnic and income levels. Cooperation was consistent across subjects. Information was collected through individual case studies in which families were visited by caseworkers at scheduled times. The hypothesis tested is that there is a statistically significant relationship between a set of predictors and criteria. Data were gathered on predictor variables grouped under the headings child, mother, and ecology. Child predictors included birthweight, Apgar score, sex, biological risk status at birth, a measure of development at 12 months using the Jordan Ad Hoc Scale of Development (AHSD), and weight at 12 months. The AHSD was developed to elicit information during interviews with unsophisticated mothers. Validity of the instrument is indicated by a statistically significant correlation between 12-month Ad Hoc scores and the 24-month Binet mental age measure. Maternal predictors included an anxiety score 6 months postpartum, age at delivery, IQ, an authoritarian score, childrearing ideology, and marital status. Ecological data included race and several measures of socioeconomic status at various ages. Measurements of cognitive attainment were taken at ages 2, 3, 4, 5, 6, 7, and 8. Criteria were (1) age 2: the intellectual score of the Preschool Attainment Record (Doll, 1966) and the Verbal Language Development Scale (Mecham, 1959); (2) age 3: the Peabody Picture Vocabulary Test, Form A (Dunn, 1965); (3) age 4: the Boehm Test of Basic Concepts and the Preschool Inventory (Caldwell, 1970); (4) age 5: the Illinois Test of Psycholinguistic Abilities, Auditory Association and

Auditory Sequential Memory Subtests, and the Wechsler Preschool and Primary Scale of Intelligence Vocabulary Subtest; (5) age 6: the Coloured Progressive Matrices, Peabody Picture Vocabulary Test (B), and Wepman's test of Auditory Discrimination; (6) age 7: the WRAT Reading Test, and Fulton's Test of Occupational Knowledge; (7) age 8: the SESAT Reading Test, and a classroom rating scale; (8) age 9: the Rubin-Balow School Behavior Profile; (9) at all ages, birth to age 11 (ad hoc) height and weight are recorded; (10) at all ages, measures of maternal values and family characteristics are gathered. The multiple linear regression model developed by Bottenberg and Ward, and Koplyay's Automatic Interaction Detector program (AID-4) are used in statistical analysis of the data.

Duration: 1960-continuing.

Publications: (1) Jordan, T.E. ***Old Man River's children.*** Academic Press (in press). (2) Ernhart, C.B.; Spaner, S.D.; and Jordan, T.E. Validity of selected preschool screening tests. ***Contemporary Educational Psychology,*** 1977, 2, 78-89. (3) Jordan, T.E. Developmental factors influencing exceptional status at age six years. ***Contemporary Educational Psychology,*** 1976, 1, 1-16. (4) Jordan, T.E. ***The mentally retarded*** (4th Ed.). Merrill Books, 1976 (contains original data from the study). (5) Jordan, T.E. Influences on preschool cognitive attainment. ***MLRV Monographs,*** 1976, 6(1). (6) Jordan, T.E. The natural history of 1,008 infants in the preschool years. National Institute of Education, 1974. (7) Jordan, T.E. ***Development and disability at age four: A prospective longitudinal study.*** CEMREL, Inc., 1972. (8) Jordan, T.E. Early developmental adversity and the first two years of life. ***Multivariate Behavioral Research Monographs,*** 1971, 6(1).

41-AA-22 CHILDREN'S CANCER STUDY GROUP

Investigator(s): Denman Hammond, M.D., Chairman, Children's Cancer Study Group, School of Medicine, University of Southern California, 1721 Griffin Avenue, Los Angeles, California 90031.

Purpose: To improve the treatment of childhood cancers through controlled clinical trials of newly developed therapies and combinations of therapeutic modalities carried out by multidisciplinary teams.

Subjects: 4,000 pediatric patients each year, ages 0 to 21, both leukemic and solid tumor patients.

Methods: Data collection and management are carried out in the group's Operations Office located at the University of Southern California School of Medicine in Los Angeles. All patient data are computerized and analyzed by the statistical staff of the Operations Office.

Duration: 1955-continuing.

Cooperating group(s): (1) National Cancer Institute, Division of Cancer Treatment, Clinical Investigations Branch. (2) Twenty-three researchers at university medical schools and children's hospitals throughout the United States and Canada including: University of Michigan, Ann Arbor; Children's Hospital of the District of Columbia; Children's Hospital of Los Angeles; Babies Hospital, New York; Children's Hospital of Pittsburgh; Children's Hospital of Columbus; Children's Orthopedic Hospital, Seattle; University of Wisconsin, Madison; University of Minnesota, Minneapolis; University of Utah Medical Center, Salt Lake City; Children's Memorial Hospital, Chicago; Princess Margaret Hospital, Toronto; University of Texas, San Antonio; University of Rochester, New York; Children's Hospital of Milwaukee; Children's Hospital of Philadelphia; Cornell Medical Center, New York; Indiana University, Indianapolis; New Jersey College of Medicine, Newark; Harbor General Hospital, Torrance; University of California, San Francisco; Children's Hospital of Louisville; and University of British Columbia, Vancouver.

Publications: A list of publications is available from the investigator.

41-AA-23 CRANIOFACIAL GROWTH STUDIES OF AUSTRALIAN ABORIGINALS

Investigator(s): Tasman Brown, D.D.Sc., F.R.A.C.D.S., Professor, Department of Restorative Dentistry; and G.C. Townsend, Ph.D., Lecturer, Department of Oral Biology, University of Adelaide, Box 498 G.P.O., Adelaide, South Australia 5001.

Purpose: To correlate morphological characteristics, functional relations, and patterns of growth and development from childhood through adolescence to young adulthood; and to study genetic family variation in metric characteris of the dentition.

Subjects: Children of pure Aboriginal ancestry, ages 6 to 20. 1,717 sets of dental casts were made for 446 boys and girls; and 1,169 sets of skull roentgenograms, for 250 boys and girls.

Methods: Field visits to Central Australia were made each year from 1961 to 1971. Semiautomatic methods of data recording, using electronic digitizing instruments, have been developed to obtain measurements from dental casts and skull roentgenograms. Genealogical records and somatometric data were also obtained. Multivariate analysis of data has included factor analysis, discriminant function, and intraclass correlation methods.

Findings: Reports have been concerned with metric characters of the dentition, skeletal maturation, the timing and sequence of tooth emergence, craniofacial morphology and growth, and general body growth. Growth standards have been developed for Australian Aboriginals.

Duration: 1961-continuing.

Cooperating group(s): Australian Institute of Aboriginal Studies, Canberra, Australia.

Publications: (1) Townsend, G.C. and Brown, T. ***Tooth size characteristics of Australian Aborigines.*** Australian Institute of Aboriginal Studies, 1977. (2) Brown, T. and Grave, K.C. Skeletal maturation in Australian Aborigines. ***Australian Paediatrics Journal,*** 1976, 12, 24-30. (3) Townsend, G.C. Tooth size variability in Australian Aborigines: A descriptive and genetic study. Ph.D. Thesis, University of Adelaide, 1976.

41-AA-24 THE ABERDEEN CHILD DEVELOPMENT STUDY

Investigator(s): Fiona Wilson, B.A., Research Psychologist; Barbara Thompson, Ph.D., Research Sociologist; and Raymond Illsley, Ph.D., Professor of Medical Sociology and Director; Medical Sociology Unit, Institute of Medical Sociology, Medical Research Council, Westburn Road, Aberdeen AB9 2ZE, Scotland.

Purpose: To determine the causal sequences underlying the relationship between levels of physical growth, intellectual functioning, physical functioning, and family patterns of reproduction, specific events of pregnancy, labor and puerperium; and to investigate the antecedents of educational performance for an entire population.

Subjects: All children born in Aberdeen City from 1950-1955, and one-fifth of their mothers.

Methods: The causal sequences are complex and may involve genetic inheritance, physiological or neurological damage, and socialization experiences between birth and the school years. In cases of severe handicap it may be possible to identify congenital or obstetric antecedents, even though precise knowledge of the mechanism may be lacking, but postnatal events may also reinforce or mitigate the original handicap. With less severe handicap where no neurological signs are evident and where, in general, incidence is heavily skewed toward poorer socioeconomic groups and larger families, social transmission through familial and educational processes of socialization is clearly most relevant. Again, however, the mechanisms of transmission need to be explored. Medical data relating to all births in Aberdeen City between 1950 and 1955 are being analyzed against a variety of social, educational, and psychological test material collected on these children during their school years. The Reading Survey data include the results of reading tests administered in 1962; IQ and attainment scores from routine testing in the schools at various ages; sociometric test results; behavioral questionnaires filled out by class teachers; extracts from school medical records and a variety of social, demographic, and school experience data. Inevitably, some of the children are siblings. A one in five sample of the children's mothers were interviewed at length concerning the family situation in general and the index child in particular. Data are available on magnetic tape. These data have already been used to some extent to study certain specific topics including mental subnormality, low birthweight, and delinquency. However, the main aim of the current project is to explore the maximum amount of data to investigate the various antecedents of educational performance for the population as a whole. Some analyses of data currently in progress include an

investigation of the association between birthweight and length of gestation, and later school performance; the antecedents and the consequences for the child of having a teen-age mother.
Duration: 1962-continuing.
Publications: Birch ***et al. Mental subnormality in the community.*** Baltimore: Williams and Wilkins, 1970.

41-AA-25 THE ETIOLOGY OF ALCOHOLISM: A LONGITUDINAL STUDY

Investigator(s): John A. Carpenter, Ph.D., Director; and David Lester, Ph.D., Director of Research, Center of Alcohol Studies, Rutgers University, Smithers Hall, New Brunswick, New Jersey 08903.
Purpose: To elucidate the social cultural, psychic, and somatic characteristics that are predictive of a heightened risk of developing problem drinking or alcoholism.
Subjects: 5,250 girls and boys, ages 13 (2700), 16 (750), 19 (750), 22 (750), and 25 (300), born in New Jersey. The subjects will be re-examined at 3- and 6-year intervals, depending on age.
Methods: The study (designed to run 30 years), formally described as a replicated cross-sectional, multiple cohort longitudinal study, will examine individuals of different birthdates at frequent intervals following the principles first described in the classic work of Schaie (1965). Data will be gathered from four general areas: sociology, physiology-biochemistry, personality-behavior, and perception-cognition. Scientists from these discipline areas and from life span developmental psychology and statistics will collaborate in the program. The Eagleton Institute of Politics, Rutgers University will obtain the samples of subjects to be used in the study through telephone contacts. In a parallel study, an anonymous matching survey will obtain information on drinking, socioeconomic status, geographic representativeness, religion, etc. of a random sample of non-participants. The main sample will be compared to the results of the survey to ensure proper representativeness despite refusals to participate. To maintain the interest of the subjects and to ensure their continued participation over the years, subjects will be paid for their participation. They will be contacted annually and brief progress reports will be elicited.
Duration: March 1978-2008.
Cooperating group(s): National Institute on Alcohol Abuse and Alcoholism; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-AA-26 NATIONAL CHILD DEVELOPMENT STUDY (1958 COHORT)

Investigator(s): Ken Fogelman, Senior Research Officer, National Children's Bureau, 8 Wakley Street, Islington, London EC1, England.
Purpose: To conduct a longitudinal, multidisciplinary study to monitor the development of a representative sample of British children; and to investigate relationships between progress and early circumstances and background factors in children's lives.
Subjects: All children living in England, Scotland, and Wales born between March 3 and 9, 1958 (approximately 17,000 children). At age 16 (i.e., at the latest follow-up) information was obtained on 87% of those known to be alive and in the country.
Methods: The study is based on the British Perinatal-Mortality Survey which obtained physical and social information on the subjects at birth. The National Children's Bureau has carried out full follow-ups at ages 7, 11, and 16, and occasional follow-ups of small groups. At each full follow-up, the children have been medically examined, parents have been interviewed, and school staffs have completed questionnaires and administered tests. When the children were ages 11 and 16, they also completed questionnaires. The current study is examining: longitudinal patterns of educational attainment, behavior and physical growth and social factors associated with change; the transition from school to work and further education; attitudes to and relationships within the family;

children's housing circumstances and their relationship with development; childhood asthma; speech and language problems; vision defects; smoking and drinking among 16-year olds; sex education and preparation for parenthood; school attendance and truancy; ability grouping in schools; characteristics of schools and children's attainment; immigrant children; children in one-parent families; adopted and illegitimate children; the progress of children identified early as gifted; a comparison of the progress of children in selective and nonselective schools; the early work experiences of handicapped school leavers; and the development of children living above ground floor level.

Findings: Refer to Publications below.

Duration: 1958-continuing.

Cooperating group(s): (1) Department of Education and Science. (2) Department of Health and Social Security. (3) Social Science Research Council. (4) Institute of Child Health. (5) National Birthday Trust Fund. (6) National Foundation for Educational Research in England and Wales. (7) Society of Education Officers. (8) Society of Community Medicine. (9) Association of Directors of Education (Scotland).

Publications: To date, 12 books and about 150 papers have been published. A full list is available from the National Children's Bureau.

GROWTH AND DEVELOPMENT

General

41-BA-1 THE CHILD DEVELOPMENT FILM ARCHIVES

Investigator(s): John A. Popplestone, Ph.D., Director; and Marion White McPherson, Associate Director, Child Development Film Archives, Bierce Library, University of Akron, Akron, Ohio 44325.

Purpose: To provide a large bank of films for research data as well as informal, unpublished photographs that will constitute a visual record of children's behavior during a 50-year interval — 1925 through 1975; and to update the collection with recent films.

Methods: The Child Development Film Archives was established in October 1976 as an adjunct to the Archives of the History of American Psychology. The initial deposits consist of two major collections: 4,000 pounds of films donated by Yale University and compiled for research purposes by Arnold Gesell, and 1,573 pounds of films given by Vassar College and collected by L. Joseph Stone for research, instructional, and demonstrational purposes. There are approximately 2,000 reels in these two collections and they are appropriately archival in nature. During the period October 1976 to October 1978, the staff processed the content of the intact film footage, and badly deteriorated film received special treatment. A complete table of contents of the films will be compiled when the film content has been reviewed. The Archives will not be restricted to the Gesell and Stone pictures but will be supplemented by a few films (e.g., those taken by David Boder, Henry H. Goddard, and Kurt Lewin) that have been acquired by the Archives of the History of American Psychology. Seventeen sets of film strips have been given to the collection by ***Parents Magazine Films.*** Researchers may donate films to the Archives. A Locator File is being established, and information may be obtained about the location of relevant pictures.

Duration: October 1976-continuing.

Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

Publications: Information is available from the investigators.

41-BA-2 HORMONE LEVELS AND BODY COMPOSITION IN ADOLESCENCE

Investigator(s): Gilbert B. Forbes, M.D., Professor of Pediatrics, University of Rochester Medical Center, River Campus Station, Rochester, New York 14642.

Purpose: To explore the possible relationships between blood hormone levels and the changes in body composition that take place during adolescence in humans.

Subjects: 300 normal girls and boys, ages 8 to 18.

Methods: Estimates of lean body mass and body fat content will be made in normal children. The hypotheses tested are (1) that the increase in lean body mass, which occurs in adolescence (most pronounced in boys), is related to the level of circulating androgens; and (2) that the increase in body fat (most pronounced in girls) is related to the level of estrogens. A subsidiary goal of the study is to establish the interrelationships among these various parameters, as well as their relationship to the clinical manifestations of adolescent growth and development. Research methods include giving each subject a K-40 count in the whole body counter, and an anthropometric measurement, a blood sample taken for hormone assays, a urine sample for hydroxyproline/creatinine ratio, an X-ray of the wrist for bone age and metacarpal cortex thickness, and a record of previous heights and weights. In addition, sexual maturity has been judged according to the Tanner standards.

Duration: 1975-continuing.

Cooperating group(s): National Institute of Child Health and Human Development; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-BA-3 VALIDATION OF THE DEVELOPMENTAL RECORD FOR INFANTS AND YOUNG CHILDREN

Investigator(s): Barry E. Burdon, M.A., Ed.M., Head, Department of Applied Psychology, Salisbury College of Advanced Education, Salisbury East, South Australia 5109, Australia; and G.R. Teasdale, Senior Lecturer, School of Social Sciences, Flinders University, Bedford Park, South Australia 5042, Australia.
Purpose: To establish the concurrent validity of the Developmental Record for Infants and Young Children (DRIYC).
Subjects: 75 girls and 75 boys, ages 3 to 60 months, located in day care and early education centers in metropolitan Adelaide, South Australia; and 30 children, ages 3 to 60 months, with known developmental delays located in metropolitan Adelaide, South Australia.
Methods: The Developmental Record Research Project was initiated in 1974 with Australian government support (see ***Research Relating to Children, Bulletin 33,*** March-August 1974, Study 33-BA-1, p. 31), and by December 1977 the DRIYC had been field trialled, the format revised, and some reliability studies conducted. Under a grant from the South Australian State Unemployment Relief Scheme three psychologists were employed to conduct this concurrent validity study. The project will involve comparing the ratings made of subjects by their caregivers or teachers using the DRIYC. The same subjects will be rated by psychologists using the Bayley Scales of Infant Development (3 to 30 months) and the McCarthy Scales of Children's Abilities (30 to 60 months). The psychologists will be trained to at least 90% test result agreement and will be familiarized with the project's work prior to the testing program. Caregivers and teachers who will use the DRIYC will receive training from the project team. Validity coefficients will be calculated for overall ratings and for subcategory ratings where possible.
Findings: A test-retest reliability coefficient of .895 and an interrater reliability coefficient of .81 were established for the experimental version of the DRIYC.
Duration: July 1978-December 1978.
Cooperating group(s): South Australian State Unemployment Relief Scheme.
Publications: Copies of the final report (including a copy of the Record and an administration manual) are available from Mr. Burdon ($8.00 U.S. to cover costs of printing and airmal postage).

Physical

41-CA-1 FOLLOW-UP OF BLOOD PRESSURE STUDIES IN CHILDREN

Investigator(s): George Entwisle, M.D., Professor; and Rita Ouellet, Instructor, Department of Epidemiology and Preventive Medicine, School of Medicine, University of Maryland, Baltimore, Maryland 21201.
Purpose: To gather pilot data on the follow-up of a large number of children who had complete examinations 5 to 7 years ago when they were ages 6 to 12; to learn what their follow-up blood pressures are; and to determine what proportion of the children can be followed, identified, interviewed, and examined.
Subjects: 550 children (black and white, approximately equally divided by sex) were identified from an earlier health examination.
Methods: The initial attempt to follow these children was through the school system where each child had a specific Board of Education number and was identified by name and address. More up-to-date addresses were obtained through the school system. Permission to participate in the

study was obtained from parents (for children under age 18) or from the children themselves. The children were interviewed and blood pressure, height, weight, and skinfold thickness (triceps and subscapular) were measured.

Findings: Seventy-five percent of all children studied in past years has been successfully identified and examined.

Duration: January 1978-July 1978.

Cooperating group(s): American Heart Association, Maryland Affiliate.

41-CA-2 CONTROL CHARACTERISTICS OF HUMAN POSTURAL SWAY TRAJECTORIES

Investigator(s): F. Owen Black, M.D., F.A.C.S., Associate Professor and Vice-Chairman, Department of Otolaryngology, Eye and Ear Hospital of Pittsburgh, 230 Lothrop Street, Room 925, Pittsburgh, Pennsylvania 15213.

Purpose: To develop and validate quantitative methods of evaluation of the vestibular system and its connections.

Subjects: All age groups from toddlers through the aged.

Methods: The method of evaluation of the vestibulo-spinal system includes simultaneous head tracking and measurement of a subject's center-of-force as projected from his center of gravity. This technique is a method of evaluating the input-output relations between vestibular sensation of head position and control of body position. The standard test includes the conventional Romberg Test with eyes open and eyes closed. At present, the technique is used as a screening test; however, in the future, either the patient's head, or the platform, or both will be moved using pseudo-random paradigms and transfer functions calculated. In another study, "Objective Clinical Vestibular Examination Methods: Computerized Posturography," funded by the Deafness Research Foundation, the investigator is also developing methods to evaluate the vestibular system. (This study began in January 1976 and was funded through June 1978.)

Findings: The method has proven to be a very effective screening method for detection and separation of vestibular and central disturbances causing loss of balance control in all age groups, but especially in children. The procedure is noninvasive and requires only 2 minutes recording time.

Duration: April 1977-March 1978.

Cooperating group(s): (1) National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare. (2) Deafness Research Foundation.

Publications: (1) Black, F.O.; Wall III, C.; and O'Leary, D.P. Computerized screening of the human vestibulo-spinal system. ***Annals of Otology, Rhinology, and Laryngology*** (in press). (2) A paper presented at the Otologic Society Meeting, West Palm Beach, Florida, April 1978: Black, F.O.; Wall III, C.; and O'Leary, D.P. Computerized screening of the human vestibulo-spinal system. (3) A paper presented at the Otologic Society Meeting, West Palm Beach, Florida, April 1978: Wall III, C.; Black, F.O.; and O'Leary, D.P. Clinical use of pseudorandom binary sequence white noise in assessment of the human vestibulo-coular system. (4) Parnes, S.; Black, F.O.; Wall III, C.; O'Leary, D.P., and Feltyberger, E. Vestibular system abnormalities in otosclerotic subjects. ***Otolaryngology,*** 1978, 86, 98. (5) Black, F.O. and O'Leary, D.P. The Vestibulo-Spinal Stability Test (VESST). ***Transactions of the American Academy of Ophthalmology and Otolaryngology,*** 1977, 84, 549-560.

41-CB-1 DEVELOPMENTAL CHANGES IN ASSESSING PHYSICAL ABILITIES

Investigator(s): Rosalie T. Torres, M.S.; and Curtis W. McIntyre, Ph.D., Associate Professor and Chairman, Department of Psychology, Southern Methodist University, Dallas, Texas 75275.

Purpose: To assess developmental changes in young children's abilities to assess their physical abilities.

Subjects: Four groups of 12 subjects each: equal numbers of boys and girls, ages 4, 7, 11, and 18.
Methods: Subjects were asked to predict, to perform, and then to repredict their performance on four simple physical tasks.
Findings: Comparisons of the predictions, performances, and repredictions revealed (1) young children grossly overestimate their ability to perform simple physical tasks; (2) young children do not improve the accuracy of their repredictions following the initial performance of a task; and (3) with increasing age, older children become more accurate in predicting and repredicting their performance on simple physical tasks.
Duration: September 1977-completed.
Cooperating group(s): St. John's Episcopal School, Dallas, Texas.

41-CC-1 MIRROR REVERSALS IN CHILDREN

Investigator(s): Jean L. Pyfer, Ph.D., Associate Professor and Graduate Coordinator, Department of Health, Physical Education and Recreation; and Nancy Dahl, Ph.D., Associate Professor, Department of Physiology, University of Kansas, Lawrence, Kansas 66045.
Purpose: To establish normative standards for the perception of reversals in children; to determine whether reversal strategies demonstrated by dyslexic children differ significantly from those of the normally developing child; and to develop a technique for predicting which children will continue to demonstrate reversal problems beyond normal expectations.
Subjects: 150 boys and girls, ages 5 to 12.
Methods: Normally developing children (i.e., children who demonstrate no academic problems) are being used as the normative sample. Children classified as reading disabled are being used as the dyslexic sample. Children are asked to manually manipulate a rotating arrow to match the position of an arrow projected into the right or left visual field. Analysis of variance will be used to analyze data.
Findings: It is normal for children to reverse stimuli at age 5; however, by age 7, normally developing children no longer demonstrate the problem. Dyslexic children continue to reverse such stimuli beyond age 7.
Duration: June 1976-June 1980.
Cooperating group(s): Lawrence School District, Lawrence, Kansas.

41-CC-2 INCIDENCE OF MONOCULAR AMBLYOPIA AS A FUNCTION OF ANISOMETROPIA

Investigator(s): H.W. Hofstetter, Ph.D., Rudy Professor of Optometry; and Theanchai Tanlamai, B.S., Associate Instructor, School of Optometry, Indiana University, 800 East Atwater, Bloomington, Indiana 47401.
Purpose: To test the hypothesis that a primary cause of monocular amblyopia is the deprivation of sharp retinal imagery in the more ametropic uncorrected eye.
Subjects: 300 anisometropic subjects of all ages and both sexes, from the files of an eye clinic in Bangkok, Thailand; and 300 subjects from the files of the Optometry Clinic at Indiana University.
Methods: Data were used to derive trends, graphically and statistically, of percentages of subjects manifesting minor and moderate degrees of monocular amblyopia at each level of myopic anisometropia and at each level of hyperopic anisometropia. The relative shapes and displacement of the trend curves should provide evidence for or against the deprivation hypothesis and indications for possible preventive measures in early infancy.
Findings: Preliminary findings suggest about two diopters of hyperopic anisometropia and six diopters of myopic anisometropia necessary to result in 100% incidence of monocular amblyopia.
Duration: December 1977-September 1978.

41-CC-3 SENSORY EVOKED EEG AND BEHAVIORAL RESPONSES IN CHILDREN

Investigator(s): Ann B. Barnet, M.D., Director; and Ira P. Weiss, Ph.D., Associate Director, EEG Research-Evoked Response Laboratory, Children's Hospital National Medical Center, 111 Michigan Avenue, N.W., Washington, D.C. 20010.

Purpose: To determine the course of development of electroencephalographic (EEG) auditory and visual evoked potentials (EPs) in normal children; to examine some of the relationships of the electrophysiologic measures to other measures of sensory development; and to develop diagnostic application of evoked response techniques in handicapped children.

Subjects: 1,000 children, ages 0 to 3.

Methods: Computer averaging is performed on responses to sets of auditory and visual stimuli presented while the EEG is being recorded. For auditory stimuli brainstem, mid-latency and long latency cortical EPs are analyzed; for visual stimuli, the periorbitally recorded electroretinogram and cortical EPs are examined. Relationships of evoked responses to EEG sleep patterns, developmental test scores, and stimulus parameters are examined. Infants and young children with neurological, sensory, and developmental disorders are being tested. Infants with perinatal hypoxia are being tested to determine the predictive value of EP measures for later outcome.

Findings: Results indicate that orderly developmental sequences occur; evoked response methods are found to be useful in the differential diagnosis of hearing loss and visual deficits in young children. EPs were abnormal in a group of infants with severe malnutrition; with nutritional rehabilitation EPs improve; but, on the measures used, did not attain normal values during a follow-up period of one year.

Duration: 1964-1979.

Cooperating group(s): (1) National Institute of Child Health and Human Development; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare. (2) Children's Hospital National Medical Center Research Foundation. (3) W.T. Grant Foundation. (4) Children's Eye Care Foundation. (5) National Foundation – March of Dimes.

Publications: (1) Barnet, A.B. ***et al.*** Abnormal auditory evoked potentials in early infancy malnutrition. ***Science,*** 1978 (in press). (2) Ohlrich, E.S. ***et al.*** Auditory evoked potential development in early childhood: A longitudinal study. ***Electroencephalography and Clinical Neurophysiology,*** 1978, 44, 411-423. (3) Barnet, A.B. ***et al.*** Averaged auditory evoked potentials during sleep in normal children from ten days to three years of age. ***Electroencephalography and Clinical Neurophysiology,*** 1975, 39, 29-41. (4) Duchowny, M.S. ***et al.*** Visual evoked responses in childhood cortical blindness associated with head trauma and meningitis: A longitudinal study of six cases. ***Neurology,*** 1974, 24, 933-940.

41-CC-4 HEARING ASSESSMENT OF NORMAL AND HIGH RISK NEONATES

Investigator(s): Robert Goldstein, Ph.D., Professor; Robert F. Burkard, B.S., Project Assistant; Helene A. Frye-Osier, M.S., Specialist; and Judith E. Hirsch, Ph.D., Research Associate, Department of Communicative Disorders, University of Wisconsin, 1975 Willow Drive, Madison, Wisconsin 53706; Carol C. McRandle, Ph.D., Associate Professor, Department of Speech Pathology/Audiology, Western Washington State College, Bellingham, Washington 98225; and Kenneth E. Wolf, Ph.D., Assistant Professor, Cincinnati Center for Developmental Disorders, University of Cincinnati, Pavilion Building, Elland and Bethesda Avenues, Cincinnati, Ohio 45229.

Purpose: To develop reliable and objective procedures for measuring threshold of auditory sensitivity to tonal stimuli in neonates; and to validate the procedures on neonates who are high risk for hearing loss or for central nervous system damage.

Subjects: Healthy babies (1) of normal gestation age who meet none of the criteria for being at risk for congenital hearing loss, (2) of early gestation age, and (3) who are high risk for hearing loss. Subjects are between 24 and 72 hours old at time of testing and are approximately equally divided by sex. By May 1978, seven normal babies and eight other babies had been tested.

Methods: Currently, subjects are presented with tone-pips of 5 msec rise/fall and no plateau; and with monaural stimulation. Stimulus levels are 10, 30, and 50dB re normal adult thresholds, and silent control. Stimulus frequencies used so far are 500, 1,000, 2,000, and 3,000 Hz. The response index consists of the middle components of an averaged electroencephalic response (AER). Early component (brainstem) responses to clicks and tone-pips are also being studied.

Findings: Clear AERs were obtained only from side of head ipsilateral to ear stimulated. Responses were identified in some babies at 10dB HL. Responses to high frequencies were much smaller than responses to low frequencies. Babies of early gestation age appear to have smaller and longer-latency responses.

Duration: 1972-1980.

Cooperating group(s): (1) National Foundation – March of Dimes. (2) National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare. (3) University of Wisconsin, Graduate School.

Publications: (1) Wolf, K.E. and Goldstein, R. Middle component averaged electroencephalic responses to tonal stimuli from normal neonates: Initial report. ***Archives of Otolaryngology*** (in press). (2) Goldstein, R. and McRandle, C.C. Middle components of the averaged electroencephalic response to clicks in neonates. In S.K. Hirsh ***et al.*** (Eds.), ***Hearing and Davis: Essays honoring Hallowell Davis.*** St. Louis: Washington University Press, 1976. Pp. 445-456. (3) McRandle, C.C. and Goldstein, R. Early averaged electroencephalic responses to clicks in neonates. ***Annals of Otology, Rhinology and Laryngology,*** 1974, 83, 695-702.

41-CC-5 A SERIES OF STUDIES ON THE DEVELOPMENT OF AUDITORY PATTERN PERCEPTION AND TEMPORAL SEQUENCING ABILITY IN CHILDREN

Investigator(s): Marilyn L. Pinheiro, Ph.D., Associate Professor/Neurosciences, Medical College of Ohio, Caller Service No. 10008, Toledo, Ohio 43699.

Purpose: To determine the relationship of auditory pattern perception and the ability to sequence tonal patterns to language and learning abilities.

Subjects: 25 to 30 normal, hearing school children in each of the following age groups: 6 to 7, 7 to 8, 8 to 9, and 9 to 10.

Methods: Tonal patterns of three temporally spaced sounds were recorded using a PDP-12 computer program. Different on-times and interburst intervals were used, since auditory patterns of longer durations were obviously easier. In pitch patterns two different pitches (high and low) were used for the three tone bursts. In loudness patterns two different intensities (loud and soft) were used. In temporal (duration) patterns two different on-times (long and short) were used. Patterns were taped and played to the children either in sound field or through earphones, depending on the particular study. All data were analyzed statistically by t-tests and analyses of variance.

Findings: The ability to sequence tonal pitch patterns seems to develop up to age 9, when children perform the same as adults. Shortening either the on-time of tone bursts or the interburst intervals from 500 msec. to 100 msec. does not prove too detrimental to performance, but shortening both decreases performance dramatically. Normal children often reverse the acoustic cues, as do adults. The type of response required is extremely important, since children, who cannot reproduce an auditory pattern verbally or manually (by pressing buttons or pointing to blocks), can hum the patterns. Therefore, the investigators are probably not testing auditory pattern perception, but rather auditory temporal sequencing ability. This ability appears highly related to the child's ability to read and perform in school. Temporal patterns involving only a difference in the duration of the three tone bursts are now being studied. Few children under age 8 or below third grade can perform the task thus far. Even children, ages 9 to 10, achieved scores within the range of only 30 to 60%. Ability decreases as the difference in duration between short and long durations decreases.

Duration: Spring 1977-December 1978.

Cooperating group(s): (1) National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare. (2) Wayne Trail School, Maumee, Ohio. (3) Douglas Road Elementary School, Lambertville, Michigan.
Publications: ***Communicative Disorders: An Audio Journal for Continuing Education***, June 1978.

41-CC-6 DEVELOPMENT OF AUDITORY FIGURE-GROUND SEGREGATION IN INFANTS

Investigator(s): Katherine A. Benson, Ph.D., Graduate Student, Psychology Department, University of Massachusetts, Amherst, Massachusetts 01003. Address correspondence to: Division of Social Science, University of Minnesota, Morris, Minnesota 56267.
Purpose: To study the development of the so-called "cocktail party effect" in infants during their first 6 months; to record infants' heart rates to see if they detect the addition of their mother's greeting to a background babble of voices; and to study the role of sound localization in this ability.
Subjects: 40 infants: 20 infants, age 12 weeks; and 20 infants, age 25 weeks, equally divided by sex.
Methods: The task in the cocktail party situation is to attend selectively to one voice in spite of a competing background babble of voices. One way adults segregate a signal is by using auditory localization when signal and noise are spatially separated. It was hypothesized that separation of signal and noise would facilitate detection in infants as well. Background babble was played continually from a loudspeaker directly in front of the infant. At specified intervals, the signal voice was added to one of two other loudspeakers, either in front of or 90° to the side of the infant. The side speaker was played to the right of half of the infants and to the left of the other infants, in order to control for possible right ear advantage in speech reception and/or right turn response biases. The continuous background babble consisted of a recording of four male and four female voices reading aloud. In addition to the mother's greeting which was 5 seconds long, a 5-second control signal was used which consisted of a segment of the background babble. The control was used because the addition of the mother's voice to the background babble changed the ambient sound on many dimensions; e.g., intensity, frequency, and location. The signal/noise ratio was nearly 1/1 but with signals about 4 decibels softer than the noise, so that the overall loudness in the room was not increased by adding them to the background babble. Two types of dependent measures were recorded on videotape – changes in heart rate and behavioral responses. The heart rate recording was played through a computer which timed the intervals between beats and computed a weighted average of the heart rate in beats per minute for each second. The videotapes were scored for smiling, visual alerting, quieting, vocalizations, cessation of fussing, and right and left head turns. There were 12 trials: six of mother's voice and six of the babble signal. Order was counterbalanced.
Findings: Both 12- and 25-week olds were able to segregate their mother's voice from a background babble of voices, as indicated by heart rate decelerations. Spatial separation of signal and noise facilitated detection of the mother's voice, but not the babble signal, for both ages.
Duration: January 1977-August 1978.
Cooperating group(s): (1) National Institute of Child Health and Human Development; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare. (2) Massachusetts State Funds.
Publications: A paper presented at the meeting of the International Conference on Infant Studies, Providence, Rhode Island, March 1978: Benson, K.A. The development of auditory figure-ground segregation in young infants.

41-CC-7 CENTRAL AUDITORY PROCESSING IN LEARNING DISABLED CHILDREN

Investigator(s): Emily A. Tobey, M.C.D., Research Associate; and John K. Cullen, Jr., Ph.D., Associate Professor, Kresge Hearing Research Laboratory of the South, Department of Otorhinolaryngology, Louisiana State University Medical School, Building 164, 1100 Florida Avenue, New Orleans, Louisiana 70119.

Purpose: To investigate the auditory and visual perception of children who demonstrate predominately auditory or visual learning disabilities in a collaborative study designed to examine the areas of speech and language, audiology, neurology, neuropsychology, and visual perception.

Subjects: Experimental group: 13 boys and 2 girls, ages 6.35 to 14 (average age: 10.5). These children performed 2 years below chronological norms on a diagnostic battery examining auditory reception, temporal sequence, memory, closure, and figure ground. Control group: 15 children matched by chronological age, sex, etc., who performed at appropriate chronological age norms on the diagnostic battery. Both groups had normal pure tone thresholds and normal discrimination for phonetically balanced work lists.

Methods: Experimental measures of dichotic speech identification and dichoptic visual perception were employed: (1) Temporal integration: Threshold determinations for frequencies were made for tone durations of 25, 50, 100, and 400 msec. Tones were presented monaurally and modified method of limits similar to standard audiometry were employed. (2) Forward and backward masking of nonspeech stimuli: Measures of forward, backward, and simultaneous masking were obtained both monotically and dichotically. Forward and backward masking was explored in separate experiments using masking intervals of 0, 1, 15, 30, 50, and 100 msec. (3) Dichotic and monotic speech masking: Identification of target consonant-vowel (CV) syllables was made in the presence of specific maskers monotically and dichotically. Levels of the masker were determined by parallel developmental studies with normal children. (4) Dichotic and monotic forward/backward masking: This was a replication and expansion of work completed in the Kresge Hearing Research Laboratory. Speech signals were CV stimuli staggered in presentation time between 0 to 500 msec. A two forced-choice paradigm was employed. (5) Dichoptic visual perception: Tachistoscopically presented graphemes were staggered in time blocks similar to those described above for the speech tasks.

Findings: Temporal integration testing suggests that some children in the experimental group have higher threshold values and differ in rate of integration for up-sweep and down-sweep stimuli. Preliminary results of dichotic scores indicate an abnormally long period before release from masking occurs. The experimental and control groups do not differ in terms of monotic performance.

Duration: June 1977-December 1978.

41-CF-1 PRIMARY DENTAL DEVELOPMENT AS A CORRELATE OF COGNITIVE DEVELOPMENT

Investigator(s): John R. Silvestro, Ph.D., Assistant Professor, Department of Educational Psychology, State University College of New York, 2089 Thompson, Fredonia, New York 14063.

Purpose: To explore the importance of timing and sequence of primary tooth eruption to later cognitive development in the preschool years.

Subjects: 200 children studied from birth to 32 months. Subjects were primarily middle and lower class children.

Methods: In this longitudinal study, the investigator, in collaboration with a pediatrician and a pedodontist, will follow for 32 months a group of low and normal birthweight children. Children will be given pediatric and pedodontal examinations as well as psychological assessments at 20 and 32 months. Tooth eruption patterns will be recorded.

Duration: April 1978-March 1981.

41-CF-2 SYSTEMATIC ASSESSMENT OF CHILD BEHAVIOR IN THE DENTAL SETTING

Investigator(s): William L. Chambers, D.D.S., Graduate Student, Department of Pedodontics, School of Dentistry, University of North Carolina, Chapel Hill, North Carolina 27514.
Purpose: To develop and employ a new behavior frequency and duration rating scale for use in dentistry; to videotape sequential appointments for 3- and 4-year-old middle class children in order to quantify the observed behaviors and establish norms for the dental behavior of this age group.
Subjects: 30 children who require an examination and at least two restorative visits. All subjects had had no previous dental experience; were between 36 and 60 months old; had no siblings in the study; were mentally and physically healthy, so that unusual treatment was unnecessary; spoke English; and were from middle class socioeconomic backgrounds as determined by Hollingshead analysis.
Methods: Subjects received an examination and two restorative visits in the dental school clinic. Treatment was delivered by a graduate student in pedodontics with help from a fully trained dental assistant. Standardized treatment using standardized dialogues was delivered at each appointment. Appointments were videotaped using a 3/4" black and white rover system on a tripod stand. Videotapes were viewed by two raters and coded using the objective quantitative scale developed for the study. Rating intervals for appointments were established.
Duration: May 1978-December 1978.
Cooperating group(s): University of North Carolina, School of Dentistry, Graduate Research Funds.

41-CF-3 PROLONGED NURSING HABIT: A PROFILE OF PATIENTS AND THEIR FAMILIES

Investigator(s): Gary J. Dilley, D.D.S., M.S., Assistant Professor; Diane C.H. Dilley, D.D.S., Assistant Professor; and Bernard Machen, D.D.S., Ph.D., Associate Professor, Department of Pedodontics, School of Dentistry, University of North Carolina, Chapel Hill, North Carolina 27514.
Purpose: To assimilate a population of children, under age 5, who had a pattern of dental decay associated with prolonged nursing habit; and to identify factors that were common among the children and among their families.
Subjects: 38 girls and 37 boys, ages 8 to 59 months, who were afflicted with a pattern of dental caries associated with prolonged nursing habit.
Methods: The sample population was obtained from children presenting to the University of North Carolina School of Dentistry for treatment in one of three areas: (1) the Undergraduate Pedodontic Clinic, (2) the Graduate Pedodontic Clinic, or (3) the Dental Faculty Practice. Any child less than 60 months of age and exhibiting a pattern of dental decay similar to that described for prolonged nursing habit was included in the study. The children were given a clinical examination for dental caries. No bitewing radiographs were taken. During this examination, the parent was asked to fill out a questionnaire dealing with their family and details concerning the child being examined. No association between the questionnaire and the child's presenting condition was given to the parent. This information was tabulated with means and ranges established.
Duration: 1974-completed.

41-CF-4 INVESTIGATION OF INFANT AND PRESCHOOL DIETS AND THEIR RELATIONSHIP TO DENTAL HEALTH

Investigator(s): Gary D. Derkson, D.M.D., Assistant Professor, Faculty of Dentistry, University of British Columbia, Vancouver, B.C., Canada V6T 1W5; and Guy A. Costanzo, Research Officer, Vancouver Health Department, 1060 West 8th Avenue, Vancouver, B.C., Canada V6H 1C4.

Purpose: To determine the incidence of nursing bottle syndrome (deep carious lesions in the upper primary incisors and the upper and lower primary first molars) in Vancouver preschool children; and to examine their health and diet histories to determine what factors might correlate with the incidence of the disease.

Subjects: As many preschool children as possible, ages 9 months to 5 years, of either sex, secured from the records of the Vancouver Health Department and child health centers.

Methods: Mothers consenting to participate will be interviewed as to the health and dietary history of their children in order to complete a detailed questionnaire. The child's teeth will be examined, using a mouth mirror and flashlight, to determine whether or not the child exhibits the typical lesions of nursing bottle caries.

Duration: May 1978-December 1978.

41-CG-1 PERCEPTUAL MOTOR DYSFUNCTION IN CHILDREN

Investigator(s): Jean L. Pyfer, Ph.D., Associate Professor and Graduate Coordinator, Department of Health, Physical Education and Recreation; and Gordon Alley, Ph.D., Professor, Department of Special Education, University of Kansas, Robinson Gymnasium, Lawrence, Kansas 66045.

Purpose: To determine the etiology and perceptual motor development of children classified as learning disabled.

Subjects: To date over 300 children (80 percent male), ages 3 to 12, referred by professional agencies.

Methods: An extensive family, medical, and educational history is taken for each subject. Subjects are administered the Forentino Reflex Test, Purdue Perceptual Motor Survey, Lincoln Oseretsky Motor Development Scale, Frostig Visual Perception Test, and selected motor items. Data are analyzed for descriptive information using cluster analysis, discriminant analysis, and analysis of variance.

Findings: Learning disability children demonstrate one of three distinct perceptual-motor developmental patterns: no developmental lags, delayed pattern in all areas tested, or an uneven pattern of development. A predictive formula has been worked out to be used as a screening device.

Duration: September 1970-June 1980.

Publications: A paper presented at the First World Congress on the Future of Special Education, Stirling, Scotland, June 1978.

41-CG-2 THE EFFECTS OF INSTRUCTION ON THE PERCEPTUAL MOTOR SKILL LEARNING OF CHILDREN AGES 4 THROUGH 7

Investigator(s): Joan C. Carson, Ph.D., Associate Professor; and Donna Cleland, Ed.D., Assistant Professor, School of Education, University of Mississippi, University, Mississippi 38677.

Purpose: To investigate the effects of trial and error learning vs. formal instruction on novel perceptual motor skill of children; and to assess sex and age differences across treatment and control groups.

Subjects: 18 boys and 18 girls, ages 4 through 7, enrolled in a university kindergarten.

Methods: The experimental group received direct instruction on a novel perceptual task (target throwing). The control group received no direct instruction. Each child in both groups had 30 throws per day for 5 consecutive days. Learning scores were analyzed by analysis of variance.

Findings: Results indicated significant sex differences within and across groups and between treatments; and varying degrees of motivation, persistence on task, and attention.

Duration: February 1978-completed.

Cooperating group(s): University of Mississippi Faculty Research Grant.

Intellectual

41-DA-1 INTELLECTUAL AND BEHAVIORAL CONSEQUENCES OF ADOLESCENT MATERNITY

Investigator(s): Joy G. Dryfoos, M.A., Fellow and Director of Planning, Alan Guttmacher Institute, 515 Madison Avenue, New York, New York 10022; and Lillian Belmont, Ph.D., Professor, School of Public Health, Columbia University, 600 West 168th Street, New York, New York 10027.
Purpose: To determine whether the children of adolescent mothers perform less well than children of older mothers on measures of IQ, school behavior, and pre- and postnatal characteristics.
Subjects: Approximately 60,000 cases from the Health Examination Survey, Cycles I and II, NCHS, and the Collaborative Perinatal Project data.
Methods: The three large-scale survey tapes have been used to produce multiple regression analyses of a large number of social and demographic variables related to IQ scores. Behavioral variables are being submitted to factor analysis techniques.
Findings: All other social and demographic factors being equal, children of young mothers are at a slight (but significant) disadvantage to children of older mothers in regard to IQ scores.
Duration: November 1976-October 1979.
Cooperating group(s): National Institute of Child Health and Human Development; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-DB-1 INTELLECTUAL REALISM AND HUMAN FIGURE DRAWING

Investigator(s): Richard J. Hofmann, Ph.D., Professor, Department of Educational Psychology, Miami University, Oxford, Ohio 45056.
Purpose: To determine the role of development in the human figure drawings of 3- to 6-year-old children.
Subjects: 9,000 children, ages 4 to 6, from a cross-sectional sample; approximately 40 children followed longitudinally for 4 years; and approximately 100 children tested individually on a battery of realism tasks.
Methods: A multidimensional scaling of a Piagetian based scoring criteria and a stage scoring method were used to assess human figure drawings. In addition, a small battery of realism tasks were developed to examine the relationship between figure drawing and intellectual realism.
Findings: The tadpole stage of human figure drawing is clearly a function of intellectual realism. Most likely, when a child approaches the stage of visual realism, development is no longer a factor in the reproduction of a form.
Duration: 1974-1979.
Cooperating group(s): McGuffey Laboratory School.

41-DB-2 STATEMENTS OF BECAUSE

Investigator(s): Tom Brener, M.F.A., Assistant Professor of Radio, TV, and Film, Northwestern University, Evanston, Illinois 60201; and F. Camper, M.S., Assistant Professor, School of the Art Institute of Chicago, Michigan Avenue at Adams Street, Chicago, Illinois 60603. Address correspondence to: Mr. Brener, 1046 West Wellington, Chicago, Illinois 60657.
Purpose: To produce a visual model of verbal and written statements of young children that involves causality.
Subjects: Children, ages 4 to 8.
Methods: A film was made integrating written word statements with decorative compositions in the film frame. Semantic linkups were designed to be deliberately ambiguous with the picture.

Image specificity was tabulated against word meaning generalizations. The model represents a proving ground for experimental information and departs from Piaget's early studies.
Duration: August 1976-Fall 1978.
Publications: The film is distributed through the New York Film Maker's Cooperative.

41-DB-3 EARLY INTERVENTIONS TO INCREASE YOUNG CHILDREN'S TASK PERSISTENCE

Investigator(s): Donald A. Gordon, Ph.D., Associate Professor, Department of Psychology, Ohio University, Athens, Ohio 45701; and Mark McLeod, M.A., Graduate Student, Department of Psychology, Emory University, Atlanta, Georgia 30322.
Purpose: To determine effective intervention techniques to use with preschool and early elementary-age children that increase attention to and concentration on difficult academic tasks; and to study individual differences that predict differential responsiveness to interventions.
Subjects: Study 1: 23 preschool boys and girls, ages 4 to 5. Study 2: 18 boys and girls in second grade.
Methods: Study 1: The experimental group received twelve 20-minute training sessions in thematic fantasy play over a 4-week period. The control group spent the same amount of time playing games with trainers. Pre- and postmeasures of concentration, waiting ability, and task persistence on experimental tasks and classroom behavior were taken. Analyses of variance were computed on difference scores and included sex and treatment group as independent variables. Study 2: Self-control (self-monitoring) was taught in a multiple baseline design.
Findings: In Study 1, the experimental group showed significant improvement on four of five dependent variables, including generalization to classroom. The control group showed no change from pre- to post-intervention. In Study 2, self-monitoring produced an increase in persistence on classroom assignments.
Duration: January 1978-December 1978.
Cooperating group(s): Private schools in Atlanta, Georgia.

41-DB-4 THE DEVELOPMENTAL RELATIONSHIP OF FIELD DEPENDENCE/INDEPENDENCE, SOCIAL EXPECTATION, AND SYNTACTIC COMPLEXITY

Investigator(s): Judith A. Steiner, M.S., Graduate Student; and Reuben R. Rusch, Ph.D., Director, Educational Research and Service Center, School of Education, State University of New York, 1400 Washington Avenue, Albany, New York 12222.
Purpose: To investigate the developmental relationship between cognitive style (field dependence/independence), a selected dimension of syntax (promise-tell), and a selected dimension of social expectation (harmonic-contrast).
Subjects: 60 English-speaking girls and boys (20 in each age group: 6, 7, and 10) in regular classrooms.
Methods: Three devices (Rod-and-Frame Test, Assessment of Expectations, Promise-Tell Instrument) are administered to the children on three separate days. The Rod-and-Frame Test is administered individually to determine the child's level of field dependence/independence. The Assessment of Expectations device is administered individually to determine the child's social expectations and to determine the form of each question of the Promise-Tell Instrument, which will be administered later.
Duration: March 1978-October 1978.

41-DC-1 INTERACTION EFFECTS OF READINESS LEVEL AND TYPE OF FORM DISCRIMINATION EMPHASIS ON TRAINING AND TRANSFER IN YOUNG CHILDREN

Investigator(s): Joanna Tyler, Ph.D., Research Analyst, Teledyne Brown Engineering, One Central Plaza, 11300 Rockville Pike, Rockville, Maryland 20852.

Purpose: To test whether kindergartners' readiness levels interact with visual and visual-verbal, and haptic and visual-haptic feature emphasis learning when measured on both training and transfer form discrimination criteria.

Subjects: 48 boys and 48 girls, ages 5.5 to 6.5, attending Frederick County, Maryland kindergartens. Subjects were selected randomly from high scorers and low scorers on the Metropolitan Readiness Test.

Methods: The children were blocked on two levels of readiness (high and low) and two levels of sex, and assigned randomly to four levels of treatment (visual, haptic, visual-haptic, and visual-verbal). This resulted in a 4 x 2 x 2 fixed factorial design. Data were collected during 20-minute individual interviews with the subjects. Children were given nonsense forms embedded in noise background during a pretraining, training and transfer session. The instrument used was designed by Silver and Rollins (1973). The dependent variable on the training task was 9 out of 27 correct trials to criterion, and the dependent variable on the transfer task was the number of correct responses on 18 total trials. Hypothesis 1 was designed to examine a planned comparison for the readiness by modality interaction. Hypothesis 1 stated that low readiness children learn form discrimination more effectively under the haptic and visual-haptic modalities compared to high readiness children, who learn form discrimination more effectively under the visual and visual-verbal modalities. Hypothesis 2 was designed to examine the simple main effect for modality for high readiness. Hypothesis 2 stated that among high readiness children, the visual and visual-verbal modality emphasis pretraining groups would perform better than the haptic and visual-haptic modality emphasis pretraining groups. Hypothesis 3 tested the simple main effect for modality for low readiness. Hypothesis 3 stated that among low readiness children, the haptic and visual-haptic modality emphasis pretraining groups would perform better than the visual and visual-verbal modality emphasis pretraining groups. The mean square error used for these comparisons was obtained from the within cell error term of a 4 x 2 x 2 analysis of variance. Two questions on the effect of sex were addressed.

Findings: Results of Hypothesis 1 indicated an interaction between modality and readiness on the training criterion. High readiness children performed better on visual and visual-verbal emphasis pretraining, and low readiness children performed better on haptic and visual-haptic pretraining. Transfer was not significant. Hypothesis 2 showed a significant effect for modality on training and transfer. High readiness children performed better under visual and visual-verbal conditions. Hypothesis 3 showed that low readiness children do not have any dominant learning modality. There was a sex by modality interaction, indicating that males perform better on visual and visual-verbal stimuli, while females perform better on haptic stimuli.

Duration: January 1977-completed.

41-DC-2 ELABORATION IN CHILDREN'S LEARNING

Investigator(s): Daniel W. Kee, Ph.D., Assistant Professor, Department of Psychology, University of Southern California, Los Angeles, California 90007.

Purpose: To assess the influence of verbal and pictorial elaboration on children's paired-associate learning and long-term retention.

Subjects: Study 1: High socioeconomic status white and low socioeconomic status Mexican-American 2nd graders. Studies 2 and 3: Middle socioeconomic status white kindergartners and 2nd graders.

Methods: In the three studies a standard study-test paired-associate technique was used. The paired-associate lists consisted of line drawings of common objects (e.g., basket-scissor; cow-tie; ring-lamp, etc.). Verbal elaboration consisted of presenting the to-be remembered noun (TBR) connected by a preposition, while pictorial elaboration consisted of depicting the referents of the TBR nouns conjoined in a spatial interaction. Verbal elaboration was compared to a standard presentation control in which the noun labels were presented alone, while pictorial elaboration was compared to a standard presentation control in which the noun referents were depicted side-by-side. In the three studies, the study trial consisted of the successive presentation of the noun pairs

for study. On the test trial, the subject was presented with one member from each pair and was required either to recall verbally or to recognize the correct associate. In each experiment, subjects were tested individually. Analysis of variance was used for statistical treatment of the data. In Study 1, two experiments were conducted to assess the effects of elaborative coding on children's long-term memory of noun pairs. The design of the first experiment consisted of a 2 x 2 crossed factorial with verbal presentation (standard vs. elaborated) and pictorial presentation (standard vs. elaborated). In the acquisition phase, white 2nd graders from the middle class learned a 20-pair list of common nouns to a 16/20 correct criterion. Long-term retention was assessed after a 7-day interval by administering three cued recall test trials. The 2nd experiment was designed to extend the foregoing results to Mexican-American children of low socioeconomic status. The basic design was a 2 x 2 crossed factorial with pictorial presentation (standard vs. elaborated) labeling mode (English vs. Spanish). A unique feature of the study was the control of original learning prior to the retention interval. That is, subjects were required to learn the paired-associate list under different conditions to a criterion of 80% correct during the acquisition phase of the experiment. After 1 week, subjects were tested for long-term memory. Three subject-paced cued recall trials were administered. The control of original learning provided an estimate of forgetting under the different experimental conditions which was not contaminated by variation in the degree of original learning. In Study 2, three experiments were conducted to assess the effects of nonbizarre vs. bizarre pictorial elaboration on the paired-associate learning of noun pairs. Five- and 7-year-old children learned a list of common noun pairs. Experiment 1 provided a between subjects analysis of bizarre elaboration effects, while Experiment 2 provided a within subjects analysis. Experiment 3 assessed the effects of nonbizarre vs. bizarre pictorial elaboration on the 7-day retention of noun pairs. In Study 3, pictorial elaboration effects were assessed under four different incidental memory conditions and a memory control, in order to provide a direct assessment of the different hypotheses (automatic encoding vs. memory instruction) advanced to account for elaborative facilitation in children's memory. The experiment design consisted of a 2 x 2 x 2 x 5 factorial with grade level (kindergarten vs. 2nd), pictorial presentation (standard vs. elaborated), list (two 14-pair lists of common noun referents), and instruction (a memory control and four different incidental memory conditions). The children (N = 120 at each grade level) were tested individually.

Findings: Study 1: Verbal and pictorial elaboration influence the initial acquisition of noun pairs, but not their 7-day retention when degree of original learning is controlled. Study 2: Bizarreness does not influence the degree of elaborative facilitation in pictorial paired-associate learning. Study 3: Pictorial elaboration automatically induces the proficient encoding of pair members within a common referential event.

Duration: Completed.

Cooperating group(s): Biomedical Science Support Grant; Division of Research Resources; Bureau of Health Professions, Educational and Manpower Training; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

Publications: (1) A paper presented at the Annual Meeting of the American Educational Research Association, Toronto, Ontario, Canada, March 1978: Sherwin, T. and Kee, D.W. Pictorial elaboration effects on Mexican-American children's long-term memory for noun pairs. (2) A paper presented at the Biennial Meeting of the Society for Research in Child Development, New Orleans, Louisiana, March 1977: Kee, D.W. Children's noun-pair learning: Assessment of pictorial elaboration and bizarreness effects. (3) A paper presented at the Annual Meeting of the American Educational Research Association, New York, New York, 1977: Kee, D.W. and Sherwin, T. Children's long-term memory for noun pairs: Assessment of elaboration effects in different populations. (4) A paper presented at the Biennial Meeting of the Society for Research in Child Development, New Orleans, Louisiana, March 1977: Nakayama, S.K. and Kee, D.W. Automatic elaborative encoding in children's pictorial learning.

41-DC-3 LONGITUDINAL ANALYSIS OF LEARNING BEHAVIOR IN INFANTS

Investigator(s): Wanda Franz, Ph.D., Assistant Professor, Family Resources; and Madlyn Willard, R.N., Nurse, Intensive Care Unit for Infants and Prematures, West Virginia University, Morgantown, West Virginia 26505.

Purpose: To assess the predictive validity of a newborn measure of learning using heart rate analysis of temporal conditioning.

Subjects: 20 normal, healthy babies (10 boys, 10 girls) born in one neonatal unit.

Methods: The infants will be tested when they are 3 days old. The nurse will obtain written permission for the tests from the mothers on their second day in the hospital. The following day, she will administer the Brazelton Neonatal Behavioral Assessment Scale. The learning assessment will be run that evening in sessions between 8 and 10 PM before feedings. When the infant is in a quiet-awake state, he will be placed on the stabilimeter, offered a pacifier, and the telemetry electrodes will be attached. Foam rubber cushions, placed on either side of the infant's head, will prevent visual exploring and cut down on extraneous noises. Learning will be assessed using heart rate data as an index of attentional mechanisms. The conditioning paradigm is a classically conditioned temporal pattern. The stimulus, presented 10 times every 30 seconds, will be a 5-second, pure 2000 Hx, 75 db tone with slow (300 msec) rise and fall time played back from an Ampex tape recorder through a speaker placed 3 feet behind and level with the infant's head. On the 11th trial, the stimulus will be omitted, and heart rate will be assessed to indicate the infant's response to an expected stimulus. The electrocardiogram (ECG) will be transmitted using telemetry equipment. From the receiver the ECG signal will be recorded on a 3M tape deck via an FM converter for later analysis. The stimulus tone will also be recorded on another channel of the tape, which will be replayed for preliminary processing of the data. The pulse signals representing the stimulus and QRS complex will be fed into a PDP-11 computer, which accumulates elapsed time, computes the interval between two succeeding heart beat pulses in milliseconds, computes the reciprocal of each interval or instantaneous heart rate in units of heart beats per minute, and records the presence or absence of the sound stimulus. This part of the computer analysis will be printed out, and the printout will be inspected for false triggers caused by motion artifacts, etc. and compared with the pen recording of the ECG from the original tape. Abnormal beat-to-beat intervals and heart rates, representing obviously false triggering, are replaced with interpolated values within the constraints of elapsed time. The appropriate locations in the computer memory are corrected, and the information is transferred to IBM compatible tape for processing of ANOVA's. Three months following the learning assessment tests, the children's parents will be contacted in order to give follow-up tests: the Uzgiris-Hunt Ordinal Scales of Psychological Development and the Bayley Behavior Profile. Correlations will be made within and across time periods.

Duration: July 1977-October 1978.

Cooperating group(s): West Virginia University Foundation, Senate Research Grants.

41-DC-4 THE INFANT'S RESPONSE TO A PERSON CHANGING HER APPEARANCE

Investigator(s): Samuel S. Snyder, Ph.D., Assistant Professor; and Karen E. Berberian; and Ann Renninger, Graduate Students, Department of Education and Child Development, Bryn Mawr College, Bryn Mawr, Pennsylvania 19010.

Purpose: To illuminate early infant memory development and social responsiveness to a person changing her physical appearance.

Subjects: 44 infants (24 girls, 20 boys), ages 3 to 12 months, from intact, white, middle to upper middle class homes. The children are full-term babies whose mothers provide the bulk of child care.

Methods: The research employs a direct test of response to the mother when she is made discrepant from the child's schema for mother. Following a 5-minute warm up, the infant is placed in an infant seat attached to a high chair. The mother and an unfamiliar female adult take seats about 6 feet in front of and slightly to either side of the infant. One of the adults (with order counterbalanced) then executes three simple behaviors for 10 seconds each: (1) approach and stand silently, (2) shake infant's hand, and (3) shake hand while talking to infant. This is repeated four times: first, as the adult normally appears, then with three sets of disguises that alter her appearance in progressively more obvious ways. The second adult does the same sequence. A videotape of the infant's reaction is made during the procedure with a hidden camera. The mother then completes the Carey and McDevitt Infant Temperament Questionnaire. The dependent variables are a series of ratings of the infant's response as recorded on tape. The instrument is adapted from one developed by J. Brooks and M. Lewis. The independent variables are infant's age (nearest month, plus or minus 3 days), infant's temperament, mother as compared to unfamiliar female adult as stimuli, degree of disguise, and the three levels of contact outlined above.
Duration: January 1978-October 1978.
Cooperating group(s): Bryn Mawr College Faculty Research Award.

41-DC-5 AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN TIME SPENT LEARNING A TASK AND ACHIEVEMENT IN THAT TASK

Investigator(s): Bryan W. Smith, B.A., B.Ed., Lecturer, Department of Applied Education, Burwood State College, 221 Burwood Highway, Burwood, Victoria, Australia 3125.
Purpose: To study the effects of learning time on achievement.
Subjects: 81 girls and boys, age 9, in grade 3. The sample was drawn from a range of ability in mathematics and a range of socioeconomic levels.
Methods: The children were divided on the basis of a pretest (the Australian Council for Educational Research Test, AM3) into high, middle, and low achievement groups. The entire sample was observed using a researcher-created time-on-task schedule (Totsch) based on categories used by Cobb. A posttest measured achievement gains.
Findings: Results showed some correlation between achievement and time on task, but ability showed a stronger correlation. Multiple regression analysis showed very minor inputs to achievement variance for time on task when considered with ability and socioeconomic level. There was a positive (though small) correlation between time on task and achievement; however, a higher correlation was found between time on task and mathematics ability.
Duration: July 1977-November 1978.
Cooperating group(s): University of Melbourne, Australia.
Publications: (1) Bennett, N. ***Teaching styles and pupil progress.*** London: Open Books, 1976. (2) Berliner, Fisher, ***et al. Beginning teacher evaluation study.*** San Francisco: Far West Laboratory.

41-DC-6 SALIENCE OF NUMBER, DENSITY, AND LENGTH IN CONSERVATION TASKS

Investigator(s): Jeanne Aschkenasy, Ph.D. Candidate; Robin L. West, Ph.D. Candidate; and Richard D. Odom, Ph.D., Professor, Department of Psychology, 134 Wesley Hall, Vanderbilt University, Nashville, Tennessee 37240; and Peter B. Pufall, Professor, Clark Science Center, Smith College, Northampton, Massachusetts 01060.
Purpose: To determine if the perceptual sensitivity to information in conservation problems affects performance on such problems.
Subjects: 40 boys and girls, age 5; and 40 boys and girls, age 6.

Methods: Subjects were assigned randomly to one of four conditions: (1) a typical number conservation problem (except no transformations were used), (2) a problem with length relevant, (3) a similar problem with density relevant, and (4) a same-different task with the same items as those above (unique because of density and length problems and basis for determining perceptual sensitivity with same-different task). Performance on the first three tasks will be compared using analysis of variance.
Duration: January 1978-June 1978.

41-DC-7 COORDINATION OF INFORMATION ACROSS THE LIFE SPAN

Investigator(s): Robin L. West, Ph.D. Candidate; Richard D. Odom, Ph.D., Professor; and Jeanne Aschkenasy, Ph.D. Candidate, Department of Psychology, 134 Wesley Hall, Vanderbilt University, Nashville, Tennessee 37240.
Purpose: To investigate the effects on problem solving performance of perceptual salience or sensitivity to relations used in coordination tasks.
Subjects: 20 boys and 20 girls, ages 9 to 14; 40 young adults, ages 17 to 22 (half male and half female); and 40 adults, ages 60 to 75 (half male and half female).
Methods: Half of the subjects at each age level were assigned randomly to a coordination problem containing information low in salience, and half were given a problem containing information high in salience. (No previous research has preassessed salience and given coordination problems to adults.) Analysis of variance examined the two salience conditions and three age groups.
Findings: The salience of information clearly affects the problem solving performance of children and adults. The development of problem solving can be attributed to changes in perceptual sensitivity. Younger adults in general perform better than children and other adults.
Duration: January 1978-June 1978.

41-DC-8 THE PRECURRENT MEDIATING FUNCTION IN YOUNG CHILDREN'S DELAYED MATCHING-TO-SAMPLE

Investigator(s): Joseph A. Parsons, Ph.D., Assistant Professor; and Teresa Johnson, B.S., Department of Psychology, University of New Mexico, Albuquerque, New Mexico 87131.
Purpose: To compare the effects of three topographically identical, but functionally different, mediating behaviors on children's conditioning and maintenance of a delayed conditional discrimination.
Subjects: Six girls and six boys, ages 5 to 6, attending a local parochial school kindergarten.
Methods: Mediating responses that were differentially reinforced with respect to the sample (differential) were compared with two control contingencies: common, in which subjects were to engage in the same mediating response regardless of the sample value; and nondifferential, in which any mediating response was reinforced. The task to which subjects were exposed was a version of delayed matching-to-sample. The apparatus involved a 5-key display with one key located in the center position and the others positioned at the four points of a compass. Trials began with the illumination of the sample stimulus in the center position – either a bright or a dim light. A single response (press) to the sample on the center key darkened it and illuminated the north and south keys with identical red lights. Appropriate responses to the red mediating keys darkened north and south and presented stimuli (bright and dim lights) for matching on the east and west keys randomized with respect to position. In all conditions, a response to the comparison stimulus that matched the sample stimulus that initiated the trial was reinforced with a 15-second presentation of a sound, color cartoon on a rear projection device adjacent to the matching apparatus. Incorrect or mismatching responses resulted in a 15-second blackout (i.e., all keys off and no cartoon presentation). Sixty trials of this type were completed each session. Subjects differed in regard to the type of behavior required to light the north and south keys during the delay interval between

the offset of the sample stimulus and the onset of the comparison stimuli. Subjects were assigned randomly to three groups: (1) Differential Response Group: Subjects were required to respond to the mediating keys dependent upon the sample value (i.e., if bright sample, respond to north; if dim sample, respond to south). Inappropriate responses had no programmed consequence. (2) Common Response Group: Subjects responded to the same mediating key regardless of the sample value (i.e., if bright or dim sample, respond to north). Inappropriate responses (responses to south) had no programmed consequence. (3) Nondifferential Response Group: Subjects responded to either north or south on all trials (i.e., if bright or dim, respond north or south). During initial conditioning of the matching-to-sample task, the minimal delay between the offset of the sample and the onset of the comparison stimuli was held at .1 second. Once a child demonstrated $\geq$ 90% correct performance for two consecutive sessions, Delay Probe Sessions were conducted in which 12 of the 60 trials had a minimum delay of 5 seconds, and 12 trials had a minimum delay of 10 seconds. Finally, subjects were denied the opportunity to respond to the mediating keys in order to assess directly the functions played by the mediating behaviors.

Findings: Performance improvement (learning) for the three groups differed significantly: differential subjects acquired high matching performance earliest; nondifferential subjects, next; and common subjects acquired matching last. The Delay Probe Session data indicated that subjects in the differential condition responded equally well (i.e., $\geq$ 90% correct) at all values of delay. Nondifferential and common subjects, however, showed decrements in performance directly related to the length of the delay interval. When subjects were no longer allowed to engage in mediating behaviors to the north and south mediating keys, differential subjects showed decrements in their performances at longer delay values, suggesting that the differential mediating responses were functioning as effective precurrent behaviors. When nondifferential and common subjects were not allowed to mediate, their performances increased over values obtained when mediating behaviors were allowed. The data suggest that behaviors of topographically identical form can function to improve or decrease performance in the matching-to-sample task depending upon their relationship to the contingencies of reinforcement. The findings also suggest that precurrent behaviors such as mediating, problem solving, self-control, etc. may be studied directly from a natural science position, and that mediating behaviors may best be conceptualized according to their functional interactions with contingencies of reinforcement rather than by their form or topography.

Duration: October 1977-June 1978.

Cooperating group(s): University of New Mexico, Research Allocations Committee.

Publications: Parsons, J.A. and Ferraro, D.P. Complex interactions: A functional approach. In B.C. Etzel, J.M. LeBlanc, and D.M. Baer (Eds.), ***New developments in behavioral research: Theory, method and application. In honor of Sidney W. Bijou.*** New York: Lawrence Erlbaum Associates, 1977. Pp. 237-245.

41-DD-1 THE EFFECT OF ITEM ORDER AND FORMAT ON MULTIPLE CHOICE TEST PERFORMANCE IN ELEMENTARY SCHOOL CHILDREN

Investigator(s): David J. Kleinke, Ed.D., Associate Professor of Education and Psychology, 337 Huntington Hall, Syracuse University, Syracuse, New York 13210.

Purpose: To investigate the effects of item order (easy-to-difficult vs. uniform) or placement of response (left or right) affect scores or speed on a multiple choice test.

Subjects: Approximately 500 fourth graders.

Methods: A 36-item test consisting of items from the Stanford Achievement Test, Intermediate II was administered to the subjects. Independent variables were sex, handedness (hand child used to take the test), placement of answers (left or right column), and item order. Dependent variables were total score and speed (number of items completed in the first 10 minutes). Data were analyzed using a 2 x 2 x 2 x 2 MANOVA.

Duration: January 1978-July 1978.

Cooperating group(s): Central Schools, West Genesee, New York.

41-DD-2 A GEORGIA ASSESSMENT AND IMPROVEMENT PROGRAM IN EARLY CHILDHOOD EDUCATION

Investigator(s): Ann W. McConnell, Specialist in Early Childhood Education and ECE Director; and Marilyn J. Ateyo, M.A., Consultant in Early Childhood Education, NEGa. CESA, 221 Fain Hall, University of Georgia, Athens, Georgia 30602.

Purpose: To design, develop, and validate a criterion referenced instrument to use to assess and evaluate the quality of early childhood education (kindergarten through grade 4) environments and programs in Georgia.

Subjects: The sample population for the development of the instrument consisted of 45 teachers in grades K through 3 at three selected model sites; and an additional four teachers in grades K through 3 at the control site.

Methods: A 2-day workshop was designed to give intensive training in the development, content, and assessment procedures involved in the use of the Criterion Referenced Program Assessment Instrument (CRI). Participants became members of data collection teams. Assessment teams were instructed to select randomly three observation periods per classroom per observer. Observations and corresponding interviews of site personnel were completed within 3 weeks. After pretesting, a staff development treatment was administered followed by posttesting in the model and control sites.

Findings: The CRI data conclusions include: (1) The control site early childhood program was markedly lower in quality when compared to the model sites at the end of the intervention period. (2) Model sites experienced differing degrees of program quality improvement. (3) Kindergartens exceeded all other grade levels in program improvement both within and across sites. (4) The CRI component Teacher Personal was the program area of greatest growth across all sites. Almost equal in growth to this area were the components Teacher Professional and the Management Structure.

Duration: August 1974-August 1979.

Cooperating group(s): Title IV C Developmental Research.

Publications: The following publications are completed – copyrights are pending: (1) Criterion Referenced Early Childhood Education Program Assessment Instrument. (2) Manual: A Guide to the Use of the Criterion Referenced Early Childhood Education Program Assessment Instrument. (3) How to Implement a Georgia Assessment and Improvement Program in Early Childhood Education. (4) The How, What, Why of Classroom Observation. (5) ***Selecting Assessment Instruments for Use in Early Childhood Education Programs: A Guide for Teachers.*** (6) Handbook: Establishing and Operating an Early Childhood Resource Center. (7) The Project GAIP Summary Report.

41-DD-3 A FACTORIAL ANALYSIS AND RESULTING NORM TABLES FOR TENNESSEE HEAD START CHILDREN BASED ON *THE DEVELOPMENTAL TEST OF VISUAL-MOTOR INTEGRATION*

Investigator(s): Barbara A. Chervin Nye, M.S., Assistant Director, Center for Community Education, University of Tennessee, Knoxville, Tennessee 37203.

Purpose: To determine whether particular variables or the interaction of the variables (sex, race, and residential location) had a significant effect on the mean scores of Tennessee Head Start children on the Developmental Test of Visual-Motor Integration (VMI); and to develop appropriate norm tables based on the findings.

Subjects: 3,766 children, ages 4 and 5, attending Head Start programs in Tennessee.

Methods: The effect of VMI scores on sex, race, (black or white), and residential location (rural, urban, and mixed urban-rural) were studied using a 2 x 2 x 3 factorial analysis of variance. A .05 level of significance was used.

Findings: There were no significant first or second order interactions for any of the groups analyzed. Sex had no significant effect on the mean scores of either the 4- or 5-year-olds. Race had a significant effect on the mean scores of both the 4- and 5-year-old children. The white children had higher mean scores than black children. The second factor to have a significant effect on the

mean scores was residential location. There were no significant differences between the mean scores of the rural and urban children; however, both of these groups had mean scores significantly different from the mean scores of children residing in the mixed urban-rural counties.
Duration: Fall 1975-completed.

41-DD-4 PROFICIENCY TESTING FOR THIRD GRADERS USING NORM REFERENCED TESTS

Investigator(s): Gary L. Brager, Ph.D., Specialist in Research, Office of Research; and James F. Skarbek, Ph.D., Coordinator, Reading Services, Baltimore County Public Schools, 6901 North Charles Street, Towson, Maryland 21204.
Purpose: To develop procedures to assess state mandated proficiency by using a subset of items from a regularly administered norm referenced test.
Subjects: 500 third grade girls and boys chosen at random to be representative of the Baltimore County school population of 10,000 third graders.
Methods: Twenty items on the Iowa Reading Test (Level 9) were selected by the Office of Reading Services. Items were chosen because they, by analysis, measured the state's ***scope and sequence*** skills for third grade reading and measured readability quotients at the state minimum level for third grade. The cutoff score was determined as follows: minimum score for proficiency was 80% of the average score on the 20 items made by the norm group. Essentially, the cutoff was 80% of grade level for the selected 20 items. This was done to maintain a common cutoff percentage with other proficiency and competency measures, and to account for psychometric properties of relative difficulty in normative tests. Each school received a list of pupils declared not proficient, and a validation study was conducted using teacher judgment, grades, book levels, and Iowa total scores.
Findings: It appears that a subset of norm referenced items can be chosen for other than psychometric reasons, a cutoff score can be chosen, and this subset can be used as if it were a CRT mastery, proficiency test, without any additional test burden.
Duration: June 1977-August 1978.

41-DD-5 FACTOR ANALYSIS OF THE MC CARTHY SCALES OF CHILDREN'S ABILITIES

Investigator(s): Michael J. Wiebe, Ph.D., Associate Professor; and Ernest O. Watkins, Ph.D., Professor, Department of Special Education, Texas Woman's University, Box 23029, TWU Station, Denton, Texas 76204.
Purpose: To investigate the factor structures and differences in structures attributable to sex in a sample of preschool children; and to investigate the construct validity of the McCarthy Scales of Children's Abilities (MSCA).
Subjects: 200 Caucasian children: 100 girls and 100 boys, age 45 months, from six suburban areas surrounding the Dallas-Fort Worth, Texas metroplex.
Methods: The MSCA was administered to 240 randomly selected children. There were no significant differences between the final 100 males and females in terms of socioeconomic status, CA, or MSCA index or raw score variables. The raw scores of each subtest were subjected to BMD Factor Analysis programs. A secondary treatment using multiple linear regression was conducted in late summer, 1978.
Findings: A "g" factor was derived for both male and female samples. Two specific factors (abstract verbal reasoning and remote verbal memory) were determined in the female sample, while two other factors (sequential memory and perceptual-motor skills) were determined in the male sample.
Duration: April 1977-December 1978.
Publications: Information is available from the investigators.

41-DE-1 CHILDREN'S ABSTRACTION AND RECOGNITION OF VISUAL CONCEPTS

Investigator(s): Donna A. Boswell, Ph.D., Assistant Professor, Department of Psychology, Old Dominion University, Hampton Boulevard, Norfolk, Virginia 23508; and Hope F. Green, M.A., Instructor, Tidewater Community College, 1700 College Crescent, Virginia Beach, Virginia 23456.

Purpose: To investigate the nature and organization of children's concepts, in order to assist instructors to teach children new concepts; and to aid in the understanding of the way in which knowledge is acquired and structured.

Subjects: 64 preschool children, ages 47 to 71 months, enrolled in an urban day care center. There were approximately equal numbers of boys and girls and black children and white children.

Methods: Each child was individually administered three procedures: a concept learning task, a vocabulary test, and a test for the generalization and retention of the concepts learned earlier. The concept learning task involved a set of materials developed by the investigators, which are similar to those used by Posner (1969) in a study with adults. They consist of two 9-point abstract figures that were drawn by randomly placing nine points on a card and connecting them to form a nondescript shape. These two figures then served as a prototype for the generation of 10 additional figures. The additional figures were constructed by randomly displacing each of the nine dots, so that the prototype represented the average boundary of its 10 variations. The child was presented sequentially with five variations of each prototype and was asked to distinguish between the two types of figures by responding to them with one of two verbal labels. The verbal labels were nonsense words and were presented in the context of being surnames for two different space families. The child learned to name each figure to a criterion of one perfect trial in which all 10 figures were labeled correctly. Each child was then administered the Peabody Picture Vocabulary Test as an interpolated task. In the final phase of the experiment, the child was presented sequentially 26 abstract figures: the two prototypes, the 10 variations of each prototype (including the subset presented earlier), and four unrelated foils, which were constructed in the same manner as the original prototypes. At this point of the experiment, half of the children were asked to accurately label those figures they had learned before and to distinguish those which were new to them. The rest of the children were given generalization instructions. They were asked to identify by name any of the figures that could belong to the two families they had learned earlier, which included those they had already met and any additional family members they had not met. They were also asked to tell which of the figures were strangers; i.e., which did not belong to either family.

Findings: The two sets of instructions employed in the third phase of the testing procedure produced different types of responses by the children. Both groups showed equivalent accuracy in remembering the previously learned items. However, the children who were asked to generalize readily labeled the two prototypes and their additional variations as family members; while the children who were asked to be accurate rejected the additional members as being new instances. This finding is significant in that it differs from the performance of adults on this type of task. Adults, regardless of instructional set, appear to recognize the prototypes as belonging to the original learning set (Posner, 1969). For children, however, the prototypes are recognized as not having been seen before and are thus treated as new instances.

Duration: January 1978-August 1978.

Publications: (1) Posner, M.I. Abstraction and the process of recognition. In G.H. Bower and J.T. Spence (Eds.), ***The psychology of learning and motivation.*** Vol. 3. New York: Academic Press, Inc., 1969. Pp. 44-96. (2) Dunn, L.M. ***Expanded manual for the Peabody Picture Vocabulary Test.*** Circle Pines, Minnesota: American Guidance Service, Inc., 1965.

41-DE-2 A CHILD'S VIEW OF SEX, RACE, AND HEIGHT

Investigator(s): Albert Prince, Ph.D., Professor and Chairman, Department of Psychology, Marietta College, Marietta, Ohio 45750.

Purpose: To assess the development of children's conceptions of sex, race (black or white), and height.

Subjects: 24 white children, ages 6 to 12: two boys and two girls selected randomly from each of grades 1 through 6 of an elementary school.

Methods: During an experimental session, each subject faced a panel containing two response buttons, a 6" x 8" display screen, and a reinforcement receptacle. Color slides of children were rear-projected on the screen, which was centered 6" above the response buttons and at eye level for most subjects. Subjects were run, one at a time, through three experimental phases. In Phase 1, 24 slides of either a black girl or a white boy were presented to half the subjects. They were instructed to push the response button they thought to be appropriate (on whatever basis) for a given picture. Subjects were intermittently reinforced with pennies for pushing one of the buttons in the presence of the black girl and the other button in the presence of the white boy. Once correct responding (80%) was established, a series of probe slides was introduced in the picture sequence. These pictures were of black males and white females. Responses to probe slides were not reinforced. It was assumed that the stimulus dimension (race or sex), most important to the subject, could be inferred from the distribution of responses to the probe slide. The procedure was the same for the remaining half of the subjects, except that the original sequence included pictures of white girls and black boys, and the probe slides were of white boys and black girls. In Phase 2, half of the subjects saw a sequence of tall white girls and short white boys; probe slides pictured tall white boys and short white girls. The other half of the subjects first saw tall white boys and short white girls; probe slides were of short white boys and tall white girls. In the final phase, the picture sequences were (1) tall white boys-short black boys with probe slides of short white boys and tall black boys, and (2) short white boys-tall black boys with probe slides of tall white boys and short black boys.

Findings: In the race-sex comparison, almost all of the children, ages 6 to 8, responded on the basis of sex; i.e., on probe trials they responded predominantly on the button associated with sex rather than race. On the sex-height comparison, sex was again the more important dimension. No consistent response pattern was found for the race-height comparison. Among children, ages 10 to 12, the results were almost reversed. They responded on the basis of race for the sex-race comparison and on the basis of height for the sex-height comparison. As in the case of the younger children, there was no consistent response pattern for the race-height comparison.

Duration: September 1977-continuing.

41-DF-1 CHILDREN'S PROBLEM SOLVING PROCESSES

Investigator(s): Esther R. Steinberg, Ph.D., Senior Specialist, Computer-based Education Research Laboratory, 252 Engineering Research Laboratory, University of Illinois, Urbana-Champaign, Illinois 61801.

Purpose: To characterize children's revision processes when solving a nonalgorithmic problem.

Subjects: 40 kindergartners and 40 second graders: normal children, both sexes, attending public schools.

Methods: The children tried to solve a novel picture problem which was presented on a PLATO terminal. Each child was given three 10-item trials in which the correct strategy was to seek exclusive information. Experimental conditions were the availability of a "can't tell" option or not, and the opportunity to get the final answer correct by luck or not.

Findings: Most kindergartners did respond to wrong answers by shifting strategies, but not all of them were able to find an appropriate one. Lucky guesses interfered with problem solution.

Duration: Spring 1977-Spring 1980.
Cooperating group(s): (1) University of Illinois Research Board. (2) Unit # 4 Public Schools.

41-DF-2 GENERALITY OF TREATMENT EFFECTS IN SINGLE PARENT-CHILD PROBLEM SOLVING

Investigator(s): Linda Bizer, Ed.D., School Psychologist, Amherst Public Schools, Amherst, Massachusetts 01002; Beth Sulzer-Azaroff, Ph.D., Professor, Department of Educational Psychology; and Ronald H. Frederickson, Ph.D., Professor, School of Education, University of Massachusetts, Amherst, Massachusetts 01003.
Purpose: To explore the cost effectiveness of teaching single mother-child pairs to solve problems mutually in a laboratory setting.
Subjects: Four single parent female college graduates, ages 30 to 40, who are all divorced and employed in professions or are in graduate school; and their four children, ages 8 to 12.
Methods: The main experimental question addressed the degree of generality of treatment effects, since cost effectiveness would be supported only if the mothers and children transferred newly acquired skills to the natural environment. The differential effects of two procedures were studied: verbal feedback plus the Family Contract Game (Blechman, 1974) and verbal plus videofeedback plus the game. All subjects received identical treatment within a counterbalanced multiple baseline design: treatment consisted of either of the two feedback conditions as the mother and child discussed their problems and played the game according to a structured format. Independent coders, blind to the experimental conditions, scored the occurrence of six responses by listening to audiotapes of the sessions. The responses were grouped into three behavioral clusters: problem description, solution behaviors, and interfering behaviors. If the training were successful, the ratio of solution behaviors to problem description would increase and interfering behaviors would decrease. (Mothers and children would talk about their problems, but as treatment progressed, they would increase the proportion of solutions achieved and decrease the behaviors that interfered with achieving mutually satisfactory solutions.) The behaviors were measured in the laboratory and in the home. In the laboratory, both a talk task and a game task were scored. In the home, subjects activated a tape recorder and engaged in the talk task only. The taped records of the home talk task were later analyzed.
Findings: Results were primarily based on the independent observations of two trained coders. It appears that training plus the passage of time were the primary factors in reducing laboratory problem description behavior for all subjects. As training progressed, verbal feedback alone seemed to have produced a stronger effect than did the combination procedure on laboratory solution behaviors for seven of the eight subjects. In the home, seven of the eight subjects' problem description behaviors appeared to be more strongly affected by the combination procedure than by verbal feedback alone. Children's (three of four) home solution behaviors showed larger increments during verbal feedback; whereas, parents (three of four) showed larger increments during the verbal plus videofeedback procedure. A 1-month home follow up revealed maintenance of treatment effects for seven of the eight subjects. Follow-up measures (2 weeks posttraining) taken in the laboratory indicated six of eight subjects maintained their increased solution behaviors, and three of eight maintained their decreased problem description responses. Compliance with contracts negotiated mutually by the parent-child pair was reported as 100%.
Duration: September 1977-completed.

41-DF-3 THE ACQUISITION OF CONCRETE OPERATIONS AND EARLY ARITHMETIC

Investigator(s): Joseph M. Scandura, Ph.D., Director, Interdisciplinary Studies in Structural Learning and Instructional Science, University of Pennsylvania, 3700 Walnut Street, Philadelphia, Pennsylvania 19104.

Purpose: To improve the understanding of the processes by which concrete operations emerge in 5- to 8-year-old children.
Subjects: 40 boys and girls, ages 5 to 8, who reside in inner city Philadelphia.
Methods: The information collected will include (1) the rules of competence that children must know to perform successfully on conservation tasks, (2) diagnostic test items, and (3) learnable problem sequences. The method of structural analysis, as outlined in Scandura (1977), will be applied recursively, with special attention to the identification of higher order rules, diagnosis, and instructional sequencing.
Duration: 1978-1980.
Cooperating group(s): National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-DG-1 EGOCENTRIC PERCEPTION IN OFFSPRING OF PARENTS WITH A HISTORY OF PSYCHIATRIC DISORDER

Investigator(s): John S. Strauss, M.D., Professor, Department of Psychiatry and Director, Yale University School of Medicine, P.O. Box 12A, Yale Station, New Haven, Connecticut 06520; and David Harder, Ph.D.; and Michael Chandler, Ph.D., Assistant Professors, University of Rochester Medical School, Rochester, New York 14627.
Purpose: To evaluate the relationship between type of psychiatric disorder in parents and cognitive/perceptual problems in their offspring.
Subjects: Boys, ages 4, 7, and 10, who have at least one parent who has a history of hospitalization for psychiatric disorder.
Methods: Families were studied in which a parent at some time was hospitalized for a psychiatric disorder. Children of previously psychotic parents were compared to children of parents who had received other diagnoses. Tests used were adapted from the World Health Organization International Pilot Study of Schizophrenia and the work of Piaget.
Findings: Children of parents with a history of psychoses have more egocentric perception than children of patients with other types of psychiatric disorder.
Duration: 1972-1981.
Cooperating group(s): National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-DG-2 A DEVELOPMENTAL STUDY OF HAPTIC PERCEPTION IN YOUNG CHILDREN

Investigator(s): Jeffrey L. Derevensky, Ph.D., Assistant Professor, Department of Educational Psychology, McGill University, 3700 McTavish Street, Montreal, Quebec, Canada H3A 1Y2.
Purpose: To provide a detailed examination of the haptic exploratory behaviors children exhibit, individual differences among children of the same age, and the extent to which haptic information processing is dependent on developmental levels.
Subjects: 40 girls and 36 boys of normal intelligence: 25 preschoolers (mean age, 57 months); 24 kindergartners (mean age, 71 months); and 27 first graders (mean age, 82 months).
Methods: A repeated measures design examining a variety of procedural patterns was incorporated in a haptic information processing paradigm. Multivariate and univariate analyses were used to analyze the data.
Findings: Success on haptic perception tasks was found to be a complex function dependent on developmental level, task requirements, procedural variations, stimulus properties, and individual abilities.
Duration: September 1976-August 1980.
Cooperating group(s): Ministry of Education, Province of Quebec.
Publications: Copies of a paper are available from the investigator.

41-DG-3 INSTRUCTION OF 4TH GRADE GIRLS AND BOYS ON SPATIAL VISUALIZATION

Investigator(s): Walter S. Smith, Ph.D., Assistant Professor, Department of Education, 205 Bailey Hall, University of Kansas, Lawrence, Kansas 66045; and Cynthia K. Schroeder, M.Ed., Teacher, Shawnee Mission Public Schools, Shawnee Mission, Kansas 66201.
Purpose: To determine whether there is a difference in spatial ability between 4th grade pre-adolescent girls and boys; and to determine whether instruction differentially affects the spatial ability of children of this age.
Subjects: 42 girls and 36 boys (each sex divided randomly into an experimental and a control group). All 78 children were enrolled in the 4th grade of a suburban school in a generally white, middle to upper middle class area.
Methods: A 2 x 2 factorial design (sex x instruction) was used. Instruction was ten 30-minute sessions over 4 weeks in which students learned how to solve tangram puzzles. Spatial ability was measured using three timed, progressively more difficult, tangram puzzles. Students were tested in groups of three or four. Test scores equalled the total time needed to complete the three puzzles. Data were analyzed using analysis of variance.
Findings: There was no significant difference between boys and girls in spatial ability, nor was there a significant interaction between sex and instruction. However, the students, regardless of sex, significantly improved their ability to solve the problems. Thus, (1) boys and girls were comparable in ability, (2) the students' ability to solve the problems was improved, but (3) there was no sex difference in this improvement.
Duration: March 1977-completed.

41-DH-1 WHOLE WORD ACCURACY PERCENTAGE IN THE CONVERSATIONAL SPEECH OF NORMALLY SPEAKING CHILDREN BETWEEN THE AGES OF 3 AND 7

Investigator(s): Beth Howard, M.S., Program Coordinator; and Lane Schmitt, M.A., Speech/Language Pathologist, Institute of Logopedics, 2400 Jardine Drive, Wichita, Kansas 67219.
Purpose: To determine the percentage of words in conversational speech of 3- to 7-year olds that are whole word accurate.
Subjects: 30 children at each level: ages 3, 3½, 4, 4½, 5, 5½, 6, and 7. Each child's birthday or half-year age level fell within 15 days of the testing date.
Methods: Each child's articulation was quickly analyzed using the Arizona Articulation Proficiency Scale (AAPS). If articulation fell within the normal range as judged on the AAPS, a 100-word sample of the child's conversational speech was tape recorded. From this 100-word sample, the percentage of words that are whole word accurate (correctly articulated) was determined.
Duration: December 1977-September 1978.
Cooperating group(s): (1) Valley Center Public Schools. (2) Wichita Public Schools. (3) First Baptist Church Day Care Center.

41-DH-2 DEVELOPMENT OF NATURAL LANGUAGE CONCEPTS

Investigator(s): Edith D. Neimark, Ph.D., Department of Psychology, Douglass College, Rutgers University, New Brunswick, New Jersey 08903.
Purpose: To investigate the development of natural language concepts from the standpoint of coordination of intension and extension of the class.
Subjects: Children in 6th and 8th grades and college students.

Methods: Subjects were asked to sort a deck of word cards into similar groups and to label each group after sorting. Classes examined included animals, food, and furniture. Data were subjected to cluster analyses to determine the structure of the class. Analyses are also being done to determine typicality ratings for class members.
Findings: The class hierarchies for adults and young adolescents are essentially similar. Typicality ratings collected in New Jersey and in Seattle, Washington reflect some very interesting regional and secular differences which suggest that evidence from research of this nature may not be capable of wide generalization.
Duration: September 1974-June 1979.
Cooperating group(s): National Institute of Child Health and Human Development; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-DH-3 CHILDREN'S COMPREHENSION OF CONJOINED COMPLEXES

Investigator(s): Charles E. Osgood, Ph.D., Professor of Communications and Psychology; and Linda Hunter, B.A., Teaching Assistant, Center for Comparative Psycholinguistics, 635 Psychology Building, University of Illinois, Urbana-Champaign, Illinois 61801.
Purpose: To determine if naturalness (complexes whose clause-ordering corresponds to the ordering of related perceived events in prelinguistic experience) and congruence (clause-pairings involving the word "and" and its adverbial derivatives) affect children's comprehension of complex sentences.
Subjects: Approximately 60 children from two age groups: 3:0 to 4:6 and 4:6 to 6:0. An equal number of boys and girls were included in each group.
Methods: The study incorporated two experiments. Experiment I compared three modes of conjoining by basic and adverbial means, yielding both natural and unnatural clause-orderings, using only congruent clauses. Experiment II compared cognitively congruent with cognitively incongruent clause-pairings, using only natural ordering of clauses. A comprehension task was used in which subjects acted out (with sets of toys) their interpretation of sentences they heard. A Clark-type analysis of variance (H. Clark, 1973) was applied to the data.
Duration: May 1978-July 1978.
Cooperating group(s): (1) National Science Foundation. (2) University of Illinois, Institute for Child Behavior and Development, Children's Learning Center/Infant-Toddler Center.

41-DH-4 LANGUAGE AND REPRESENTATION IN NORMAL AND MENTALLY HANDICAPPED CHILDREN

Investigator(s): C.G. Sinha, B.A., Research Associate and Principal Investigator; and Norman H. Freeman, Ph.D., Project Supervisor, Department of Psychology, University of Bristol, 8-10 Berkeley Square, Bristol BS8 1HH, England.
Purpose: To investigate processes of coordination and integration of systems and processes of the representation of knowledge through the study of the development and acquisition of relational prepositions in normal and subnormal children.
Subjects: Approximately 45 severely subnormal boys and girls of various ages and diagnostic categories; and a larger sample of normal children, ages 8 months to 7 years.
Methods: Children are given a set of tasks involving relations like *in* and *on*. The most advanced are given language-production tasks. Below that level, the major interest is in language comprehension tasks. For each task there is a nonlinguistic ***analogue control*** involving imitation and construction games. The least developed children are given search tasks for an object hidden in different relationships which the more advanced children are asked to construct. There is one set of relationships that runs through a set of tasks, appropriate to normal age levels of 8 months to 5 years.

Findings: The results to date indicate that infants have a set of biases dealing with the function and appearance of objects. When these are overcome, they appear again, as higher symbolic levels are required in the tasks. The young children are extremely contextually-sensitive. ESN(S) children seem to be similar in the former respect and different in the latter.
Duration: October 1977-September 1980.
Cooperating group(s): Social Science Research Council, Great Britain.

41-DH-5 A YOUNG CHILD'S VOCAL DEVELOPMENT

Investigator(s): Rosalind Charlesworth, Ph.D., Assistant Professor, Educational Foundations and Inquiry, Bowling Green State University, Bowling Green, Ohio 43403.
Purpose: To study vocal development, in naturally occurring situations, of a young child from infancy to age 4½.
Subject: One girl followed from ages 2 months, 22 days to 4½ years.
Methods: Monologues and structured and unstructured dialogues were tape recorded at regular intervals. Phonetic analysis was used on infant samples (CV ratios, TTRs, etc.). Later samples (2½ to 3¼ years) have been coded using Halliday's function categories.
Findings: The results of the infant analysis indicate the possibility that the phonological content of infant vocalization is more varied and more meaningful than usually recognized. Monologue/dialogue differences are clearly apparent. The Halliday category analysis also presents contextual differences.
Duration: 1977-1979.
Cooperating group(s): Bowling Green State University, Faculty Research Committee.
Publications: A paper on the infant data is available from the investigator.

41-DH-6 A COMPARISON OF ORAL LANGUAGE DEVELOPMENT AND READING READINESS MEASURES

Investigator(s): Barbara Simmons, E.Ed., Associate Professor and Area Chairperson; and Paula Smith Lawrence, E.Ed., Assistant Professor, Department of Early Childhood/Elementary Education, School of Education, Texas Tech University, Lubbock, Texas 79409.
Purpose: To examine possible correlations between various reading and reading readiness measures, complex oral language development measures, and a simple aural cloze test developed by one of the investigators.
Subjects: A random sample of 44 first grade boys and girls who speak English as a first language.
Methods: The following measures were administered to all subjects: Gates-MacGinitie Reading Test, Primary A; Analytical Reading Inventory; Peabody Picture Vocabulary Test; Oral Language Measure (taped interview); and the Aural Cloze Test. The Oral Language Measure and the Aural Cloze Test were designed by the investigators to be used in this study. The common topic of school was selected, since it was assumed to be typical of the experiential background of first graders. An oral language sample was elicited during an interview in which the subjects were shown a series of six sequenced pictures related to the topic. The Aural Cloze Test required completions supplied by the children for random verb deletions in an 11-sentence passage read aloud by the interviewer. The administration of the two measures was rotated. Other information gathered included birthdates of all subjects, teachers' judgment of each child's current reading level and oral language proficiency (high, average, or low), and the scores obtained earlier in the year on the Metropolitan Reading Readiness Test.
Duration: September 1977-August 1978.
Cooperating group(s): Texas Tech University Research Funds.

41-DH-7 A STUDY OF THE DEVELOPMENT OF LITERACY IN PRESCHOOL CHILDREN

Investigator(s): Yetta M. Goodman, Ph.D., Professor, College of Education, Department of Elementary Education, Building #69, University of Arizona, Tucson, Arizona 85721.
Purpose: To describe and explore aspects of how written language emerges in young children prior to formal school instruction, in order to provide insights into the nature and development of reading and writing proficiency.
Subjects: 100 children, ages 2 to 5, representing varying sociocultural and socioeconomic backgrounds. The children are from Tucson and include Native Americans, Caucasians, Blacks, and children from Spanish-speaking cultures.
Methods: The subjects, who have had no formal literacy instruction, are given a series of tasks involving written language. The tasks begin with the most concrete representation of the message within a situational context and will be gradually decontextualized so that the final task is the most abstract and has the least situational context support. Subjects' responses will be categorized according to type and appropriateness and subjected to statistical analysis. Qualitative information will be collected, such as a description of the language used by the children in talking about language. A bookhandling knowledge task will also be given to determine the extent to which preschoolers are familiar with print in books. Writing samples will be collected to analyze beginning writing development, and a concepts of writing interview will be given to determine preschoolers' concepts and attitudes about writing.
Findings: Preschoolers as young as age 3 are aware of print in their environment. They recognize that the print rather than pictures and symbols communicate the message. As the print becomes less contextualized, the children's responses become less appropriate, and they become restless and inattentive.
Duration: 1975-1979.

41-DH-8 STUDENTS' COMMUNICATIVE COMPETENCE IN INSTRUCTIONAL CONTEXTS

Investigator(s): Louise J. Cherry, Ed.D., Assistant Professor, Department of Educational Psychology; and Faculty Associate, Wisconsin Research and Development Center for Individualized Schooling, University of Wisconsin, 1025 West Johnson Street, Madison, Wisconsin 53706.
Purpose: To investigate the development of school age children's communicative competence in the classroom; and to identify individual differences in these skills.
Subjects: Girls and boys, age 6, who speak standard English.
Methods: Video- and audiorecordings are made of small group reading interactions in a teacher directed and all student condition. Language is assessed prior to data collection. Transcription, coding according to functional language categories, and analysis are used to make comparisons among individual children.
Duration: January 1978-January 1980.
Cooperating group(s): National Institute of Education; Education Division; U.S. Department of Health, Education, and Welfare.

41-DH-9 THE YOUNG STUTTERER: EFFECT OF LINGUISTIC STRATEGIES

Investigator(s): G. Beverly Wells, Ph.D., Associate Professor, Department of Speech Pathology and Audiology, SAC 240, University of Northern Iowa, Cedar Falls, Iowa 50613.
Purpose: To determine the effect of linguistic intervention strategies with young stutterers, ages 3 to 8, applying Chomsky's linguistic theory.
Subjects: 19 boys and 1 girl, ages 3 to 8, with no hearing loss, who were diagnosed as stutterers after receiving a full differential diagnostic intake battery.

Methods: Using a same subject design, disfluencies per 100 words were analyzed in situations of varying linguistic (propositional, syntactical, semantic) complexity, varying social complexity, and varying pressure complexity in a multiple time series design. The therapy program was implemented for 22 sessions, each with a follow-up maintenance period of 6 months, consisting of one follow-up session per month. Tapes of home and school situations were included in addition to videotapes of therapy and maintenance sessions. A t-test was applied in each instance to determine significant differences in each situation.
Findings: To date, all subjects show significant increase in fluency during therapy and maintenance.
Duration: August 1977-September 1978.

41-DH-10 THE ACQUISITION OF ENGLISH AS A SECOND LANGUAGE

Investigator(s): Deborah Keller-Cohen, Ph.D., Assistant Professor, Department of Linguistics, and Assistant Research Scientist, Center for Human Growth and Development, University of Michigan, Ann Arbor, Michigan 48109.
Purpose: To explore variation in the acquisition of grammatical and conversational skills by children learning English as a second language.
Subjects: Four children, ages 4 to 8: two Japanese-speaking children, one Finnish-speaking child, and one Swiss-German-speaking child.
Methods: The investigator is considering variations in acquisition of language skills caused by native language influence and language learning strategies. The research includes a longitudinal study of free play between each child and a native English-speaking adult, and smaller sample between each child and a native English-speaking child.
Findings: The native language seems to play an important role in the earliest stages in terms of the structures on which the child initially begins to work. Later in development, the native language exerts influence when the child has become proficient enough in the second language to incorporate more specific native language structures into speech.
Duration: 1974-1978.
Cooperating group(s): University of Michigan, Graduate School, Faculty Research Grants.
Publications: Information is available from the investigator.

Personality

41-EA-1 PSYCHOMETRIC AND THEORETICAL CREDIBILITY OF THREE MEASURES OF INFANT TEMPERAMENT

Investigator(s): Byron Egeland, Ph.D., Professor, Department of Psychoeducational Studies, n548 Elliott Hall; and Amos Deinard, M.D., Professor, Department of Pediatrics, Medical School, University of Minnesota, Minneapolis, Minnesota 55455.
Purpose: To investigate the psychometric properties, particularly the interrater reliability and short-term stability of three different measures which claim some relation to the construct of infant temperament; and to seek implications regarding the concept and characteristics of the construct through an examination of the intercorrelation of these measures.
Subjects: 188 families who received medical care (pre- and postnatal) through the Minneapolis Public Health Clinics, and whose children were delivered in the same local, public hospital. All were primiparous mothers of low socioeconomic status who were recruited for this study in approximately their 8th month of pregnancy.

Methods: The measures used were a Nurses' Rating Scale, Brazelton's Neonatal Behavioral Assessment Scale (1973), and Carey's Survey of Temperamental Characteristics (1970). The Nurses' Rating Scale, modified for this study, was completed by attending nurses at the end of each shift every day the infant was in the newborn nursery. The scale consists of 15 items rating the baby as above average, average, or below average on such behaviors as fussiness, alertness, soothability, activity, eating, and sleeping. Four items dealt with the mother and her skill and interest in the baby; one item rated the father's interest. The Brazelton exam was administered in the home by trained examiners when the infant was 7 and 10 days old. The test consists of 27 items rated on a 9-point scale, as well as 17 reflexes rated as low, medium, or high. The items involve such behaviors as habituation to visual, auditory, and tactile stimulation; orientation toward visual and auditory stimuli; alertness; muscle tone; irritability; activity; and consolability. Examiners, trained by one of Brazelton's coworkers, met required standards for administering and scoring the test. During the course of the investigation, examiners periodically observed each other's administration and scoring in order to maintain high reliability. The Carey Survey was completed by the mothers when each infant was 3 and 6 months old. It is composed of 70 three-alternative, multiple choice items related to the baby's responses to different types of every day situations such as feeding, sleeping, bathing, etc.

Findings: The Nurses' Rating Scale interrater reliability data suggest that there is good agreement between raters with very consistent directionality of the ratings. This provides evidence that nurses are able to discriminate these behaviors in neonates and tend to judge them similarly to their colleagues. According to the total set of ratings for each baby, it is usually the case that each infant was rated consistently throughout his hospital stay, and that ratings were seldom split between the two extremes of the 3-point scales. When ratings are correlated between the 4 rating days, each day is not correlated with every other day. In fact, there is most frequently only one or two of a possible six correlations over the 4 days which are significant, most of them between days 3 and 4. The items rating the mother also tend to show relatively few significant correlations over days. On these four mother-based items, all four correlated from day 2 to day 3, and three of them correlated from day 3 to day 4. Two possible explanations for this are (1) the instrument is not precise or accurate enough to obtain high correlations between all the days; and (2) the mothers' and babies' behaviors probably are initially disorganized and unpredictable (mothers' behaviors begin to stabilize on the 2nd day; babies' behaviors, not until the 3rd day). The Brazelton exam obtained good interrater reliability, indicating that the behaviors rated can be reliably and accurately observed by two trained individuals. However, test-retest reliability between days 7 and 10 for many items was less than desirable, seriously calling into question the stability of infants' behaviors in the first days of life. It should be taken into account when interpreting the results that the exams were administered in the home with all the distractions inherent in that environment – in contrast to much of the work with the Brazelton, which was administered under standard, controlled, optimal conditions. It was not always the case that the baby was in an optimal state for the exam at administration time. To control for differences introduced by these nonoptimal conditions, an analysis was done on a subsample of infants in which state was the same on the two testings. This did not significantly improve reliabilities. Even controlling for state, it appears that the behaviors measured by the Brazelton are not stable over time. On the other hand, when stability is assessed by comparing rank ordering of items on Test 1 to ordering on Test 2 for each baby, the correlations are significantly higher. These data seem to suggest that the pattern or configuration of items across the test for each baby remains relatively stable over several days, even though the specific score on each item may change. The factor score reliabilities were consistently higher than the dimension score reliabilities (often quite low), casting doubt on the usefulness of this formulation of the basic factors of infant temperament. The dimension discrepancies, even though they may appear to suggest good stability in the categories, must be interpreted with caution because of the restriction of range of scores. Stability on the Carey from 3 to 6 months showed moderate correlations on seven of the nine scales and a respectable canonical correlation of .78. Unfortunately, the factor analysis failed to reveal any logical cross-behavior clustering of the items into scales. Factor analyses of the Nurses' Rating Scale and the

Brazelton obtained clear and logical factors. Intercorrelations of the three measures provided no substantial correlations even between scales which were supposedly measuring similar behavior.
Duration: 1977-continuing.
Cooperating group(s): National Center on Child Abuse and Neglect; Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.
Publications: A paper presented at the Biennial Meeting of the Society for Research in Child Development, New Orleans, March 1977.

41-EA-2 PERSONALITY INVENTORY FOR CHILDREN

Investigator(s): Robert D. Wirt, Ph.D., Professor and Director, Health Care Psychology, University of Minnesota, Minneapolis, Minnesota 55455; David Lachar, Ph.D., Chief Psychologist, Lafayette Clinic, 951 East Lafayette, Detroit, Michigan 48207; James K. Klinedinst, Ph.D., Director, Diagnostic Services, Comprehensive Mental Health Services, 1876 Wildwood Drive, Virginia Beach, Virginia 23454; Philip D. Seat, Ph.D., Psychologist, Ft. Lauderdale Schools, 3233 N.E. 32nd Avenue, Ft. Lauderdale, Florida 33308; and William E. Broen, Jr., Ph.D., Professor, Department of Psychology, University of California, Los Angeles, California 90024.
Purpose: To develop a comprehensive, clinically relevant, soundly research-based instrument for the assessment and screening of children on a number of dimensions of personality.
Subjects: 2,400 normal boys and girls, ages 6 to 16; 200 normal boys and girls, ages 3 to 6; and a variety of criterion groups (emotionally disturbed, delinquent, brain damaged, retarded, psychotic, etc.).
Methods: Both empirical and rational clinical scales were developed. The empirical scales were developed by contrasting normals with criterion groups using scaling techniques developed by Darlington. Rational scales were developed using clinical judges to select appropriate content by methods developed by Wiggins and by Klinedinst. There are also four Validity Scales.
Findings: The test appears to be reliable and valid, useful for both research and clinical practice.
Duration: July 1957-completed.
Publications: Wirt, R.D.; Lachar, D.; Klinedinst, J.K.; and Seat, P.D. ***Multidimensional description of child personality: A Manual for the Personality Inventory for Children.*** Los Angeles: Western Psychological Services, 1977.

41-EA-3 THE RELATIONSHIP OF PROSOCIAL REASONING, SOCIAL RESPONSIBILITY, AND PERSONALITY CHARACTERISTICS TO PROSOCIAL BEHAVIOR: A DEVELOPMENTAL STUDY

Investigator(s): Margaret O'Connor, Ph.D., Staff Psychologist, Division of Child Psychiatry, Children's Memorial Hospital, 2300 Children's Plaza, Chicago, Illinois 60614; Jacqueline Cuevas, B.A., Research Associate, Department of Psychology, Mundelein College, 6363 North Sheridan Road, Chicago, Illinois 60660; and Steve Dollinger, Ph.D., Assistant Professor, Department of Psychology, Southern Illinois University, Carbondale, Illinois 62901.
Purpose: To study the relationship of prosocial reasoning, social responsibility, and personality characteristics to prosocial behavior.
Subjects: Approximately 25 boys and 25 girls each from 3rd, 5th, and 7th grades of parochial schools in Chicago.
Methods: Subjects were given paper and pencil tests measuring personality variables, prosocial reasoning, and social responsibility. Teachers' ratings of prosocial behavior were obtained. A test-retest (2-week interval) reliability estimate was made for measures of social responsibility and prosocial reasoning.
Duration: January 1978-August 1978.

41-EB-1 A STUDY OF YOUNG CHILDREN'S HOLISTIC FUNCTIONING IN EXPERIENCING AND EXPRESSING

Investigator(s): Joy Hope Redfield, Ph.D. Student, Pacific Oaks College, #6 Westmoreland, Pasadena, California 91103.

Purpose: To relate motion environments to children's learning, learning environments, thought processes, and cognitive-affective task performance.

Subjects: Approximately 300 girls and boys, ages 3.6 to 11. The sample includes normal children with small problems (low self-concept, stuttering, antisocial behavior, etc.), who were referred by teachers; and abnormal children under the care of a psychiatrist in an outpatient setting.

Methods: This study uses an ethnographic research methodology. Children and teachers contribute to assessments. Motion assessments of children are made by experts. The Self-Concept Affective-Psychomotor Inventory and Draw-A-Person Test were used with 14 populations of children.

Findings: Dimensions of preventive mental health appear to relate to creative motion environments and self-concept. The basic language of children appears to be motion, overlayed with sights, sounds, words, and feelings.

Duration: 1969-1979.

Cooperating group(s): Public and private schools.

Publications: ***Dance/movement experiences.*** Carson, California: Educational Insights, 1974.

41-EB-2 YOUNG CHILDREN'S CRITERIA FOR GENDER IDENTIFICATION

Investigator(s): Estelle S. Gellman, Ph.D., Department of Counseling, Psychology and Research in Education; and Ruth Formanek, Ph.D., Professor, Department of Elementary Education, Hofstra University, Hempstead, New York 11550.

Purpose: To investigate young children's ability to make gender identifications; and to explore the criteria on which these classifications were based.

Subjects: 39 girls and boys were interviewed in their nursery schools: 19 boys and 11 girls, age 4, were formally interviewed by one of the researchers; and 5 girls and 4 boys, ages 3 to 5, were informally interviewed by their teachers.

Methods: In the formal interviews, children were individually asked eight questions related to either sex. It was believed that children might hold back information from a strange interviewer in the formal situation, so additional data were obtained from interviews between teachers and their students. In these interviews, questions concerned the children's own gender identity. The data were first analyzed in terms of the number of correct gender classifications and the type of criteria given for making the gender identification. The criteria for classifications fell into six categories: (1) defining characteristics; i.e., anatomical differences; (2) tertiary observable differences; i.e., hairstyle, clothing; (3) stereotypic sex role characteristics; i.e., athletic prowess; (4) authority; e.g., "Mommy told me"; (5) irrelevant criteria; e.g., "I have curly hair"; and (6) subjective certainty; e.g., "Because I know." Chi-square analyses were performed to determine (1) whether the number of correct gender identifications was significantly better than chance, (2) whether one criterion was used significantly more or less frequently than others, (3) whether the criteria that were offered as reasons for self-gender identifications were significantly different from those offered as the basis for determining the gender of other children, and (4) whether there were significant differences between the responses of boys and of girls. A chi-square analysis was also performed to determine whether there was a significant preference for maleness.

Findings: An analysis of the number of correct gender identifications indicated that every gender identification was correct. With a 50% probability of being correct by chance, these results are significant. None of the children cited anatomical differences or sex role stereotypes as the reason for knowing their own gender or another child's gender. The absence of criteria in each of these categories was significant when contrasted against the frequency with which criteria falling in the

other categories were used. No significant differences were found between the sexes, nor between the criteria used for self-classification as opposed to the classification of others. Analysis of the responses to the question of which gender was better indicated that all of the girls thought it was better to be a girl, and all of the boys except one thought it was better to be a boy.
Duration: Completed.

41-EB-3 FROST SELF-DESCRIPTION QUESTIONNAIRE: EXTENDED SCALES – A NORMATIVE STUDY

Investigator(s): Barry P. Frost, Ph.D., Professor and Chairman, School and Community Psychology and Special Education Programs, Department of Educational Psychology, University of Calgary, Calgary, Alberta, Canada T2N 1N4.
Purpose: To norm the extensions of the Frost Self-Description Questionnaire.
Subjects: Aproximately 100 boys and 100 girls, grades 4, 6, and 8, from six schools in Calgary – a socioeconomic cross-section of the city.
Methods: A project, "A Standardization of the Frost Self-Description Questionnaire," was funded by the University of Calgary Research Grants Committee in 1969. As a result, a personality test – The Frost Self-Description Questionnaire – was developed and has been used, both in research and service settings, in various parts of Canada and Great Britain. In cooperation with colleagues in Japan, Argentina, and Mexico, Japanese and Spanish language versions have been developed and used in research in Japan, Argentina, and Puerto Rico. An Afrikaans version was developed for research use in the Republic of South Africa. Extended scales of 20 items each have been developed to measure: projective aggression, internalized aggression, externalized aggression, free floating anxiety, body damage anxiety, separation anxiety, concentration anxiety, worry and tension, social anxiety, test anxiety, affiliation, and denial. Pilot studies have been run with these scales and point biserial correlations calculated for items. They are satisfactory. It is now necessary to norm these extended scales. The normative study will involve the testing of children, ages 9, 11, and 13, in several schools, selected to give a socioeconomic cross-section of the city. It is desirable to have at least 100 boys and the same number of girls at each age level. In addition to the calculation of the usual descriptive statistics (e.g., mean and standard deviation) for each scale, which will form the normative data, correlational and factor analytic studies will be done. Point biserial correlations (item with scale total) will be obtained, and factor analyses (principal components with varimax rotation) will be carried out (1) on all of the extended scales together, (2) on the anxiety scales alone, and (3) on the aggression scales alone. The Statistical Package for the Social Sciences computing package will be used to compute both the descriptive statistics and the factor analyses. The proposed factor analyses are necessary to establish the construct validity of the scales and are the same used to establish the original Frost Self-Description Questionnaire. More sophisticated analyses of a predictive nature are planned.
Duration: April 1978-December 1978.
Cooperating group(s): University of Calgary, University Research Policy and Grants Committee.

41-EB-4 SELF-CONCEPT AND IDENTIFIED PROBLEM DIFFERENCES BETWEEN PRE- AND POSTMENARCHEAL ADOLESCENTS

Investigator(s): S. Gray Garwood, Ph.D., Assistant Professor, Department of Psychology, Tulane University, New Orleans, Louisiana 70118.
Purpose: To examine the relationship between menarche and self-concept, focusing especially on the role of self-concept as an ***organizer*** of behavior.
Subjects: 130 white girls attending a private school; and 102 black girls attending a public school (average age, 13).

Methods: Subjects were tested in school in physical education classes with the Mooney Problem Checklist and the Tennessee Self-Concept Scale. The independent variables were menarcheal states (four levels) and race. Dependent variables included demographic variables, Tennessee scores, and Mooney scores. The major hypothesis tested was that increases in self-concept and problems would occur for postmenarcheal girls. Data were analyzed using a multiple analysis of variance technique.
Findings: There were significant differences between pre- and postmenarcheal females and between racial groups. Postmenarcheal females had more problems but higher self-concepts.
Duration: January 1977-completed.

41-EC-1 AN INVESTIGATION OF SEVERAL COMPONENTS OF MORALITY AND THE EFFECT OF KOHLBERGIAN EDUCATIONAL INTERVENTION ON THE COMPONENTS IN THE 2ND GRADE CLASSROOM

Investigator(s): M.L. Corbin Sicoli, Ph.D., Lecturer in Education and Psychology, Department of Psychology, Cabrini College, King of Prussia Road, Radnor, Pennsylvania 19087.
Purpose: To determine if Kohlberg's program, ***First Things: Values,*** is able to induce growth on several variables within one semester; to assess the pre- and posttest ***structure*** of morality; and to ascertain what demographic variables affect moral growth.
Subjects: 36 girls and 36 boys, ages 6 through 8 (average IQ, 112), enrolled in 2nd grade classrooms in an upper middle class, suburban district in Southeastern Pennsylvania.
Methods: The variables investigated include intentionality, immanent justice, roletaking ability, donating behavior, positive justice, and attitudes toward punishment. Six classrooms participated in the study, of which one was a control that received pre- and posttesting only. Piagetian moral stories were used to assess moral dimensions, and William Damon's Positive Justice Interview was used to assess positive justice. Pretesting on an individual basis was conducted in September; posttesting, in December. The subjects were exposed to ***First Things: Values*** for approximately 10 weeks.
Findings: Compared to the controls, the experimental subjects grew to a statistically significant degree on the roletaking, intentionality, and positive justice variables, and on a combined measure of moral growth. Correlational analysis at pretesting revealed only 4 of 29 possible nonredundant correlations among variables were significant at the .10 level. After exposure to the program, 14 of 29 possible nonredundant correlations were significant (12 of these at the .05 level), possibly indicating that this educational intervention enhances and consolidates structure as regards moral development. Negative correlations were found between birth order and morality.
Duration: August 1976-continuing.
Publications: (1) A paper presented at the Eighth International USC Conference on Piagetian Theory and the Helping Professions, University of Southern California, February 1978. (2) A paper presented at the Fall Meeting of the Moral Education Association, Rutgers University, 1977.

41-EC-2 MODERATORS IN THE VALUE-BEHAVIOR RELATIONSHIP

Investigator(s): Richard L. Gorsuch, Ph.D., Professor; and Steve Fedorko, Graduate Research Assistant, Department of Psychology, University of Texas, Arlington, Texas 76010.
Purpose: To examine potential moderators that prevent the value-behavior correlation from being high.
Subjects: 200 seventh grade boys and girls, half of whom are Chicano or Black.
Methods: Using Acceptance of Responsibility and Awareness of Consequences measures to see if value-behavior relationship is high for those accepting responsibility and those who are aware of consequences for others.
Duration: September 1976-completed.
Cooperating group(s): University of Texas, Arlington research funds.

41-EC-3 COMPARISON OF *THE DEFINING ISSUES TEST* SCORES OF STUDENTS SELECTING OR NOT SELECTING AN ALTERNATIVE HIGH SCHOOL

Investigator(s): M.L. Corbin Sicoli, Ph.D., Lecturer in Education and Psychology, Department of Psychology, Cabrini College, King of Prussia Road, Radnor, Pennsylvania 19087.
Purpose: To determine any differences in the moral judgment of students who elect to attend an alternative high school as compared with students who elect to attend the regular district high school.
Subjects: Approximately 45 male and female juniors and seniors attending either an alternative or a traditional high school in a suburban, upper middle class school district in Southeastern Pennsylvania.
Methods: The subjects, judged by teachers to be above average in ability, were administered James Rest's Defining Issues Test. Analyses were done to determine whether there was a statistical difference in overall score. In addition, actual dilemma choices will be tallied to see if students answer differentially in response to various moral dilemmas. Comparisons will be made of the students' use of antiauthoritarianism, the extent to which they would endorse meaningless statements, their score on a principles reasoning scale, and differences between the content of law breaking choices.
Duration: January 1978-January 1979.
Publications: Information is available from the investigator.

41-EC-4 TRAINING CHILDREN TO BE CONSISTENTLY HONEST THROUGH VERBAL SELF-INSTRUCTIONS

Investigator(s): William M. Casey, Ph.D., Senior Staff Counselor/Psychologist, Psychoendocrinology Clinic, Children's Hospital, 235 Bryant Street, Buffalo, New York 14222; and Roger V. Burton, Ph.D., Professor, Head of Developmental Psychology Program, State University of New York, Buffalo, New York 14222.
Purpose: To examine the effectiveness of particular kinds of instructions in promoting consistent honesty in children.
Subjects: 60 first and 60 fourth graders (30 boys and girls in each grade), ages 6 to 10, from middle class backgrounds.
Methods: It was hypothesized that self-instructional training would be more effective than external instructions, and that broad verbal terms would be more effective than specific terms in promoting generalization of honest behavior. The children were assigned randomly to one of six treatment conditions generated from a combination of three levels of training term and two levels of instructional technique. The procedure consisted of five pretreatment temptation tasks in Session 1, treatment task and five posttreatment temptation tasks in Session 2, and a moral concept interview in Session 3. Repeated measures ANOVA and correlational analyses were conducted.
Findings: The most general training term employed, "honesty," was most effective in promoting generalized honest behavior. This was particularly evident for females trained to use verbal self-instructions. The terms employed in training had significant effect upon labels children later used to describe temptation situations.
Duration: January 1977-completed.

41-ED-1 PROSOCIAL AND AGGRESSIVE BEHAVIOR PATTERNS AMONG SOCIALLY REJECTED, AVERAGE, AND POPULAR 5TH GRADERS

Investigator(s): Kenneth A. Dodge, B.A., Doctoral Candidate; and John D. Coie, Ph.D., Associate Professor, Department of Psychology, Duke University, Durham, North Carolina 27705.

Purpose: To determine interpersonal dyadic behavior patterns among groups of children who differ according to sociometric status, as defined by social choice nominations by peers.

Subjects: 138 fifth graders from five classrooms of a semirural elementary school were interviewed for sociometric choices (liking and disliking). The 10 children who received the greatest number of nominations as ***disliked*** and the fewest number of nominations as ***liked*** were chosen as the ***socially rejected*** target sample. Matching this group for race and sex, 10 average and 10 popular children were chosen on the basis of sociometric information. The average group received close to the mean numbers of nominations, and the popular group received many liking nominations and few disliking nominations. One average child and one popular child were dropped from the study because of absenteeism.

Methods: This study was a naturalistic observation study which focused on a child's behavioral interaction pattern with peers in the classroom and on the playground. Following the selection of children to be observed, each of two observers independently coded the frequencies of various behaviors of a particular child during six blocks of 5 minutes each, so that each child was observed for a total of 60 minutes. The blocks spanned both classroom and playground times of the day. Categories of behavior coded included prosocial approaches, instrumental approaches, aggressive approaches, prosocial receptions, instrumental receptions, aggressive receptions, and solitary behaviors. The variance among groups was analyzed related to frequencies and durations of these behaviors and the correlations among various behaviors within groups were analyzed. A replication of the same observations, using the same children and different observers, was completed 4 months later.

Findings: It was found that socially rejected children prosocially approached others more often, aggressed more often, were aggressed against by others more often, and spent less time in solitary behavior than either other group, both in the classroom and on the playground. The frequency of social behaviors was highly correlated to the frequency of aggressive behaviors within each group. A theory of social activation among socially rejected children was posited and discussed.

Duration: September 1976-September 1978.

Cooperating group(s): Durham County Elementary School System, North Carolina.

Publications: A paper presented at the Fifth Biennial Southeastern Conference on Human Development, Atlanta, Georgia, April 1978.

41-ED-2 SOCIAL COGNITION AND SOCIAL BEHAVIOR IN AGGRESSIVE AND NONAGGRESSIVE CHILDREN

Investigator(s): Kenneth A. Dodge, B.A., Doctoral Candidate, Department of Psychology, Duke University, Durham, North Carolina 27705.

Purpose: To explore the distinctive social perceptions in identified aggressive and nonaggressive children and the effect of those perceptions on behavior; and to examine the child's use of information about the intentions of a peer in determining his own behavioral reactions.

Subjects: 90 boys (30% black): 15 aggressive and 15 socially adept, nonaggressive boys (matched for race) in grades 2, 4, and 6 of a semirural elementary school. Boys were selected on the joint basis of peer nominations and teacher assessments.

Methods: It was hypothesized that under ambiguous circumstances, nonaggressive children would tend to interpret a peer's behavior as benevolent and act accordingly, while aggressive children would tend to interpret the behavior as malicious and would retaliate. In a laboratory experiment, each aggressive and nonaggressive subject was led to believe that he was participating in a puzzle-making contest in an effort to win a prize. During the course of the contest, his puzzle was temporarily removed and was returned completely destroyed, presumably costing him his chance to win the prize. He was led to believe that his puzzle was destroyed by a peer, who acted intentionally, accidentally, or ambiguously. The behavioral reactions of the subject, who was given a chance to retaliate, were videorecorded and served as the dependent measure. This crossed factorial experiment controlled for: two subjects (aggressive and nonaggressive), three conditions (intentional, accidental, or ambiguous), and three grade levels (2, 4, and 6).

Findings: Preliminary findings generally support the hypotheses; i.e., that all groups of subjects (even 2nd graders) would differentiate their behavior according to the intentions of a peer. Aggressive children tended to react behaviorally to ambiguous circumstances with aggression, while nonaggressive children tended to react with benevolence.
Duration: September 1977-September 1978.
Cooperating group(s): Durham County Elementary School System, North Carolina.

41-ED-3 SOCIAL COGNITION AND THE PERCEPTION OF INTENTIONS IN AGGRESSIVE AND NONAGGRESSIVE CHILDREN

Investigator(s): Kenneth A. Dodge, B.A., Doctoral Candidate, Department of Psychology, Duke University, Durham, North Carolina 27705.
Purpose: To explore the perceptions of peers' intentions by aggressive and nonaggressive children and the role the perceptions have in determining subsequent behavior.
Subjects: 90 subjects (30% black): 15 aggressive and 15 socially adept, nonaggressive boys (matched for race) in grades 2, 4, and 6 of a semirural elementary school. Boys were selected on the joint basis of peer nominations and teacher assessments.
Methods: This study took the format of a structured interview with individual children. Children were asked to make inferences about the hypothetical behavior of specific peers which resulted in a negative outcome for the subject. It was hypothesized (1) that the ambiguous behavior committed by known aggressive children would be interpreted as hostile, while the same behavior committed by known nonaggressive children would be interpreted as benevolent; (2) that aggressive subjects would tend to interpret the hypothetical ambiguous behavior of a peer as hostile, while nonaggressive subjects would interpret the same behavior as benevolent; and (3) that the correlation between the inference about intention and the subject's subsequent behavior would be high and would increase with age. Utilizing a private, tape recorded interview format, all subjects were asked to imagine several behavioral vignettes in which the subject suffered a negative outcome as the result of some behavior clearly committed by a specific, identified peer, who had been previously identified by the subject as aggressive or nonaggressive. It was the subject's task to infer the intentions of this peer as being hostile or accidental, and to propose a course of subsequent behavior (either aggressive retaliation or not). The design was a repeated measures 2 (aggressive and nonaggressive subjects) x 2 (aggressive and nonaggressive targets) x 3 (grades 2, 4, and 6) factorial experiment. The relationship between the child's inference of intent and his proposed subsequent behavior was examined at each level.
Findings: The effect of target (having been identified as aggressive) on the inference of hostile intentionality is clear, at all age levels, by both groups of subjects. Aggressive subjects tended to respond with more inferences of hostility than did the nonaggressive subjects. The relationship between the inference and subsequent behavior differed for each subject group, however, and changed with age.
Duration: September 1977-September 1978.
Cooperating group(s): Durham County Elementary School System, North Carolina.

41-EF-1 ADOLESCENT LONELINESS

Investigator(s): Timothy Brennan, Ph.D., Senior Research Associate; and Nathan Auslander, Investigator, Behavioral Research Institute, 2305 Canyon Boulevard, Suite #105, Boulder, Colorado 80302.
Purpose: To examine social and psychological aspects of loneliness among adolescents.
Subjects: Over 5,000 children, ages 10 through 18, from four probability samples.

Methods: In this study adolescents were identified as lonely vs. nonlonely. Loneliness was measured according to both objective sociometric data (number of friends, amount of time spent with friends, etc.) and subjective variables (feelings of loneliness, of being bored, etc.). Through multivariate statistical methods, differential patterns of emotional and social isolation were developed and tested. Loneliness was examined in terms of predictor variables from the following general domains: social contextual (home, school, and peer relations); personality variables (self-esteem, shyness, value orientations, internal/external control, social alienation, powerlessness, normlessness, etc.); and situational contingencies (e.g., divorce of parents, relocation, school failure, or suspension, etc.). The investigators examined statistical approaches to the prediction of loneliness using multiple linear regression and techniques of numerical taxonomy. Typologies of youth were developed to examine differential processes leading to loneliness and to clarify the multivariate contexts of loneliness in adolescents. Finally, theoretical models of the loneliness in adolescence were developed and tested using both analytical techniques.
Duration: July 1977-August 1978.
Cooperating group(s): National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare.

Social

41-FA-1 A SIMULATIONAL MEASURE OF CHILDREN'S COGNITIONS IN PROBLEMATIC SOCIAL SITUATIONS

Investigator(s): Maurice Jesse Elias, M.A., Doctoral Candidate; Jack M. Chinsky, Ph.D.; and Susan F. Zlotlow, M.A., Department of Psychology, Box U-30, University of Connecticut, Storrs, Connecticut 06268; and Stephen W. Larsen, M.A., Executive Director, United Social and Mental Health Services, Inc., Putnam, Connecticut 06260.
Purpose: To assess children's understanding of situations and persons, consideration of possibilities via means-to-ends cognitions, specificity of planning, expectancies about outcomes and initiative-taking required, and cognitive-behavioral strategies for resolution.
Subjects: Investigation 1: 83 girls and boys, ages 6 to 8, from a rural area in northeastern Connecticut, from a mixture of white and blue collar families. Average IQ of the children is approximately 110. Investigation 2: 85 children from the Investigation 1 sample, with approximately a 90% overlap. Investigation 3: A subsample of 30 children from Investigations 1 and 2.
Methods: The Social Problem Situation Analysis Measure (SPSAM) was developed and validated. It is a pictorial measure of children's reactions to problematic social situations which provides sequences of unfolding action and allows assessment of the characteristics described in the Purpose. Investigations 1, 2, and 3 represent three waves of measurement over a 6-month period. The research design was correlational, though children undergoing an intervention program were compared on the SPSAM to a no treatment group to allow for an assessment of differential sensitivity to changes. Multiple levels of evaluation were used with multiple sources of data: teachers, peers, self-report, and various SPSAM subscores, corresponding to the characteristics being assessed.
Findings: Internal validation data support SPSAM as measuring distinct sets of variables corresponding to characteristics assessed. Social problem solving variables significantly predicted social adjustment criteria. Children's cognitive reactions are strongly influenced by situational factors, especially obstacles to attempted resolutions of problems. SPSAM has considerable potential as a clinical tool and as a research-evaluation instrument once the scoring system is simplified.
Duration: March 1976-December 1977.
Cooperating group(s): (1) Tolland School System, Tolland, Connecticut. (2) University of Connecticut Research Foundation. (3) University of Connecticut Computer Center. (4) Flushing-Whitestone Research Support Services, Queens, New York.

Publications: (1) A paper submitted to the 1978 meeting of the American Psychological Association: An innovative measure of children's cognitions in problematic interpersonal situations. (2) Copies of the SPSAM and related materials and copies of the paper are available from Mr. Elias.

41-FA-2 THE EFFECT OF STIMULUS-PERSON DISADVANTAGE ON ALLOCATION BEHAVIOR IN CHILDREN

Investigator(s): Otto Zinser, Ph.D., Associate Professor; and Marvina C. Rich, Department of Psychology, East Tennessee State University, Johnson City, Tennessee 37601.
Purpose: To investigate allocation behavior in grade school children.
Subjects: 30 (14 girls and 16 boys) third graders; 15 (8 girls and 7 boys) fourth graders; and 45 (20 girls and 25 boys) seventh graders from East Tennessee State University School.
Methods: Equity theory (Adams, 1965) suggests that persons assigned the task of allocating rewards will give, when performance and other factors are held constant, a larger share to a disadvantaged than to a nondisadvantaged individual. This is said to be a result of the allocator's perception that the disadvantaged individual invested more in the task. To have performed as well, the disadvantaged individual must have expended more effort. Subjects in this study were asked to divide rewards (20 dimes) between pairs of stimulus persons, described as the same or varying in age or ability and as the same or varying in performance on a basketball shooting task. A three-factor ANOVA with repeated measures on stimulus person disadvantage was used.
Findings: The magnitude of compensatory allocations for organismic disadvantage was significantly higher in the 7th graders and highest when performance was most discrepant. Under the unequal performance conditions, when organismic disadvantage was held constant, the 3d-4th graders tended to make equal allocations and the 7th graders, performance allocations. Overall, the results suggested that equity becomes more salient as age increases.
Duration: August 1976-completed.
Cooperating group(s): East Tennessee State University, Research Development Committee.

41-FA-3 SOCIAL DEVELOPMENT RELATED TO INFORMATION PROCESSING ABILITY: REPORT OF THE CONSTRUCTION OF A TEST TO MEASURE INFORMATION PROCESSING ABILITY IN CHILDREN, AGES 3 TO 5

Investigator(s): Victoria M. Lyons, M.A., Ph.D. Candidate; and Stephen M. Levine, Ph.D., Professor, Counseling and Personnel Services, College of Education, University of Maryland, College Park, Maryland 20742.
Purpose: To develop a test to measure globally the information processing ability that would seem to be involved in social learning in children, ages 3 to 5; and to support the hypothesis that individual differences in information processing ability are significantly related to the ability to learn in vicarious social learning situations.
Subjects: Caucasian, Black, Oriental, and Indian children, ages 3 to 5. Pilot I: 17 boys and 9 girls. Pilot II: 14 boys and 8 girls. Future normative sample: 60 to 100 children, equally divided by sex, attending private preschools in Washington, D.C.
Methods: Procedure I: Test Development. A picture sequencing test was developed to measure the children's ability to perceive, evaluate, and utilize environmental cues by means of conceptual associations. The test required children to arrange a series of pictures sequentially so that they related a series of situation-action-outcome events that revealed a coherent theme. The test entailed 10 items plus two unscored sample items. Each item was comprised of three illustrated cards which were presented to the child in an illogical order. The child was instructed to arrange the cards so that they told a story that made sense. Initially, 25 items were constructed and administered to the Pilot I sample of 26 children. From the results, 15 items were selected and administered for validation to the Pilot II sample of 22 children. From these results, a final 12-item test

was selected which will be administered to the normative sample. Split-half reliability will be determined and reported. Validity will be reported in two ways: first, the test will be correlated with the Peabody Picture Vocabulary Test and the Concept Assessment Kit – Conservation (both instruments measure intelligence and information processing ability); and second, factor analysis will be conducted to discover a loading aside from the first factor "g" (general intelligence). The second loading should be responsiveness to informational cues. Normative scores will also be reported for each age group broken into 6-month intervals and by sex. Procedure II: Relation between Information Processing Ability and Social Learning. Results of the picture sequencing test (administered to the normative sample) will be correlated with amount of learning on a vicarious learning task (a primitive social learning task). The task will involve listening to a taped word list upon which the model is reinforced for critical responses. Subjects are instructed to listen to the word list and emit any word they desire after every 5th word. It was hypothesized that children who measure high in information processing ability should emit significantly more critical responses than children who measure low in information processing ability.

Findings: A developmental trend in scores appears to exist.

Duration: November 1977-May 1979.

Cooperating group(s): University of Maryland, Center for Young Children.

41-FA-4 INTERACTIONS BETWEEN 4-YEAR-OLD CHILDREN AND SELECTED CLASSROOM PLAY CENTERS

Investigator(s): Barbara George, Ed.D., 9256 Cal Road, Baton Rouge, Louisiana 70809.

Purpose: To investigate what amount of participative, constructive, and social interaction occurred with individual 4-year-old children in randomly controlled groups in the following selected play centers: books and records, homemaking, large manipulative toys, and small manipulative toys and games.

Subjects: 33 Caucasian boys and girls, ages 51 to 61 months, enrolled in two classrooms at a day care center in Baton Rouge, Louisiana, from upper socioeconomic backgrounds.

Methods: Each classroom contained the same four play centers. The centers were the same size in each classroom and were duplicated with the same materials, equipment, and furniture. The children were observed in the center for 27 school days in March and April 1978. A team of two trained observers scored daily the observed participative, constructive, and social interactions. The participative interaction category was designed to note if the subject participated in an activity or used the materials in the selected play center. There were two rankings in this category: participation activity and absent activity. The constructive interaction category was designed to note how the child handled the materials, equipment, and/or furniture in each of the play centers. This category had four rankings: constructive, neutral, destructive, and absent activity. The social interaction category was designed to note the interaction of the subject and peers in the play centers. There were six rankings in this category: unoccupied, solitary, onlooker, parallel, associative, and cooperative play.

Findings: The results revealed that participation activity exceeded absent activity in all four of the play centers. Constructive activity occurred more often than neutral, destructive, or absent activity in all play centers. The social interaction category elicited a variety of results in the play centers. There was very little unoccupied play in each center. Solitary play occurred less than 5% of the observed time in each center. Most of the recorded solitary play was found in the books and records center. Small amounts of onlooker play were also noted. The largest amount of onlooker play was found in the small manipulative toys and games center. Parallel play was found most often in the large manipulative toys center. The books and records center elicited the most associative play, and the homemaking center elicited the most cooperative play. A combination of the scores from the interaction categories was compiled. There were 28 combinations. The three combinations occurring most frequently were: PCP (participating constructively in a parallel play situation), PCC (participating constructively in a cooperative play situation), and PCA (participating constructively in an associative play situation).

Duration: September 1977-July 1978.
Publications: George, B.D. Interactions between 4-year-old children and selected classroom play centers. Unpublished Ed.D. dissertation, Louisiana State University, 1978.

41-FB-1 **THE ROLE OF GENDER IN DETERMINING THE INFLUENCE OF MOTHERS AND PEERS ON TODDLER PLAY**

Investigator(s): Neil Cohen, Ph.D., Department of Psychology, Western Kentucky University, Bowling Green, Kentucky 42101.
Purpose: To determine if gender differences occur in play as a function of the human environment.
Subjects: 13 boys and 13 girls, ages 21 to 24 months, from white middle class families living in a midwestern city.
Methods: This was an observational study conducted in the subjects' homes. Data were collected using a checklist of play behaviors. Play quality (high and low) and the amount of time spent at an activity were also recorded. A repeated measures analysis of variance was used to analyze the data.
Findings: Boys play most frequently with peers, while girls play most frequently with mothers.
Duration: July 1977-completed.
Publications: A paper presented at the Southeastern Conference on Human Development, Atlanta, Georgia, April 1978. Information is available from the investigator.

41-FB-2 **MALE AND FEMALE IN CHILDREN'S READERS: A CROSS-CULTURAL APPROACH**

Investigator(s): Florence L. Denmark, Ph.D., Executive Officer and Professor, Ph.D. Psychology Program, Graduate School, City University of New York, 33 West 42nd Street, New York, New York 10036; and Judith A. Waters, Ph.D., Assistant Professor, Department of Psychology, Fairleigh Dickinson University, Rutherford, New Jersey 07070.
Purpose: To determine the extent to which societies, regardless of economic and political orientation, engage in sex role stereotyping. Sex role stereotyping was analyzed as it was encountered in the children's primary textbooks of five countries (France, Spain, Sweden, Union of Soviet Socialist Republics, Socialist Republic of Rumania).
Methods: Translations were made of every story in readers which were considered to be equivalent to those used in the first grade in the American elementary school system: the French material consisted of 110 stories; Spanish, 97; Rumanian, 105; Swedish, 74, and there were 162 pages of Russian material. Only translators who had been socialized in the specific country were employed to avoid misrepresentation of the behaviors involved. In cooperation with the authors they analyzed (1) the contents of the stories for appearance of males and females as central or peripheral characters, (2) the age group (adult or child), and (3) whether the male and female characters portrayed a traditional or nontraditional sex role by the standards of each country. A quantitative analysis was made of the central story themes, and evaluations were made of the differences in the attitudes and values of various societies toward appropriate sex roles.
Findings: Analysis of the five sets of primary readers supported initial assumptions that, despite some differences in the presentation of men and women in society, all countries subscribe to the traditional sex role stereotype. Except for the Swedish texts, there were fewer female characters than males in all texts. Whereas some women in the Russian, Rumanian, and Swedish texts were shown in less traditional roles, only the Swedish text showed men or boys in the nurturant or nontraditional role.
Duration: 1976-completed.
Publications: Poortinga, Ype H. (Ed.) ***Basic problems in cross-cultural psychology.*** Berwyn, Pennsylvania: Swets North American, Inc., 1977.

41-FB-3 ANDROGYNY AND THE PERCEPTION OF MARITAL ROLES

Investigator(s): Sandra Pursell, Ph.D., Intern, Veterans Administration Hospital, Palo Alto, California 94305; and Paul G. Banikiotes, Ph.D., Associate Professor; and Richard Sebastian, Ph.D., Assistant Professor, Department of Psychology, University of Notre Dame, Notre Dame, Indiana 46556.

Purpose: To study the effects of sex role orientation and family background on attraction to and preference for mates.

Subjects: 94 male and 83 female undergraduates, ages 18 to 22.

Methods: A questionnaire was used to collect family background data, reactions of subjects to a variety of descriptions of family situations, and subjects' descriptions, through test data, of their ideal mate.

Findings: Androgynous subjects preferred androgynous mates. Women had a greater preference for androgynous mates, while men had a greater preference for stereotyped mates. Mother's occupation and parents' satisfaction with it had a critical impact on the student's choices. Father's occupation had no impact on choices.

Duration: February 1977-May 1978.

41-FC-1 ELEMENTARY STUDENT BREAKFAST EATING HABITS AND OPINIONS CONCERNING THE SCHOOL BREAKFAST PROGRAM IN PICKENS COUNTY, SOUTH CAROLINA

Investigator(s): Robert F. Borgman, D.V.M., Ph.D., Professor; and Joe E. Toler, Instructor, Experimental Statistics, Department of Food Science, South Carolina Agricultural Experiment Station, 223 Plant and Animal Science Building, Clemson University, Clemson, South Carolina 29631; and Sara Ann Lusk, Teacher, McKissick Elementary School, Easley, South Carolina 29640.

Purpose: To determine the breakfast eating habits and opinions of elementary school students.

Subjects: 333 girls and boys, ages 9 to 13, in grades 4 through 6. About three-fourths of the children were of normal body conformation; the rest were equally divided between the underweight and overweight. Three-fourths of the children were white; one-fourth were black.

Methods: The researchers investigated (1) foods and nutrient content eaten for breakfast, (2) where and when breakfast was eaten and food preferences, (3) reasons why breakfast was not eaten, and (4) the relationship of breakfast statistics to body size characteristics. Four women teachers from the McKissick Elementary School in Easley, South Carolina questioned the students. Each student was interviewed by one of the teachers for 5 to 10 minutes. The style of questioning was standardized as much as possible through discussions with the interviewing teachers and use of a questionnaire.

Findings: Of the students interviewed, 13% did not eat breakfast at home or at school. Students reported that when breakfast was skipped, they felt hungry, did not feel well, and did not perform well in their studies. About one-quarter of the students utilized the school breakfast program, and only half the students interviewed liked the school breakfast program. Most students preferred to eat at home (62%), but others (17%) preferred a midmorning snack. The most frequent reason that breakfast was skipped was that it was not prepared for them at home (82%). The foods eaten for breakfast were those usually considered traditional. In general, boys ate more breakfast (calories, protein, fat) than did the girls. There were some variations in breakfast consumption related to body conformation categories and race.

Duration: Fall 1976-completed.

41-FD-1 SEX ROLE SOCIALIZATION IN THE NURSERY SCHOOL

Investigator(s): Bonni R. Seegmiller, Ph.D., Associate Professor, Department of Psychology, Hunter College, City University of New York, 695 Park Avenue, Box 1449, New York, New York 10021; and Barbara Suter, Ph.D., Private Practice, 498 West End Avenue, New York, New York 10024.

Purpose: To define sex role differentiation; specifically to evaluate the adequacy of a number of sex role measures, including both verbal-objective tests and naturalistically observed behaviors; to examine the relations between these different types of measures and consider the problem of construct validity; and to provide more refined definitions of assertion, dependency, and cooperation. To study the interactions between age and sex role differentiation by tracing the development of aggression, dependency, and cooperation in preschoolers. To describe and explain the influences of the nursery school and of personal, social, and demographic characteristics on sex role differentiation; specifically, to determine whether nursery school teachers and children differentially respond to aggression, dependency, and cooperation, or to subclasses of these behaviors, according to the sex of the child; and to determine if such differential responding by teachers and peers relates to the socioeconomic status of the child. To collect longitudinal data on sex role differentiation during the preschool years.

Subjects: Approximately 500 boys and girls, ages 3, 4, and 5, in nursery schools throughout New York City. Children in ten 3-year-old classes at the time of the first year's data collection were followed for 3 years; children in eight 4-year-old classes were followed for 2 years; while those in six 5-year-old classes were seen only for 1 year. Within each age level, the classes were equally divided between public day care (lower income) and private nursery schools (middle income).

Methods: The study has three major parts: pretests, observations, and posttests. These are repeated each year that the child is in the study. Information on sex role differentiation was available from two sources. First, the children were pre- and posttested each year on five measures of sex role development and one measure of intelligence. These included the Draw-A-Person, Nadleman's Differential Memory for Masculine and Feminine Items Test, DeLucia's Toy Preference Test, the It-Test, and the Occupational Preference Test. Additionally, the child, teacher, child-child, and teacher-child behaviors were observed at 2- to 3-week intervals in the naturalistic environment of the preschool classrooms. Information on personal, socioeconomic, and sibling characteristics was also available.

Findings: Sex role differentiation is evident by age 3 on both objective and observational test measures. Socioeconomic differences are not present on the tests. The tests measure different things. Sibling characteristics influence sex role differentiation.

Duration: June 1975-May 1979.

Cooperating group(s): National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare.

Publications: (1) Seegmiller, B.R. ***Measuring sex role development: A comparison of two methods.*** ERIC Document Reproduction Service, 1978. (2) A paper presented at the Annual Meeting of the Eastern Psychological Association, Washington, 1978: Suter, B. Effects of age, sex, and income level on sex role differentiation as measured by five sex role tests. (3) A paper presented at the Annual Meeting of the Eastern Psychological Association, Boston, 1977: Seegmiller, B.R. Measuring sex role development: A comparison of two methods. (4) A paper presented at the Annual Meeting of the Eastern Psychological Association, Boston, 1977: Dunivant, N. Statistical problems in the assessment of sex role development.

41-FE-1 AN INVESTIGATION OF CHILDREN'S TELEVISION VIEWING HABITS AND CORRELATIONS WITH SCHOOL ACHIEVEMENT

Investigator(s): Nancy L. Quisenberry, Ed.D., Associate Dean for Undergraduate Studies, Dean's Office, College of Education; and Charles B. Klasek, Ph.D., Director of International Education, Southern Illinois University, Carbondale, Illinois 62901.

Purpose: To determine the hours children spend viewing television; the lateness of those hours; and correlations between hours spent viewing television and school achievement, parents' occupations, sex, and IQ.

Subjects: 364 students in 1976 and 265 students in 1977.

Methods: The children completed diaries that listed all TV programs shown in their area for a period of 1 month. The data were analyzed by frequency of programs viewed and total number of hours viewed by the children on week days and nights. Data were also obtained on children's intelligence, achievement scores in school, and parents' occupations.
Findings: The 1976 data revealed very few correlations between children's TV viewing habits and their school achievement. The top three categories of programs viewed by children were situation comedies, news, and cartoons.
Duration: January 1976-August 1978.
Cooperating group(s): Logan School, Marion, Illinois.
Publications: A paper will be submitted to the ERIC Data Base.

41-FE-2 THE FREQUENCY OF CREATIVITY COMPONENTS ON TWO CHILDREN'S TV PROGRAMS AND STUDIES OF THE ABILITY OF 3-YEAR OLDS TO EXHIBIT THE COMPONENTS

Investigator(s): Mae E. Dillon, M.A., Preschool Teacher, Gaithersburg Presbyterian Preschool, 16700 Frederick Road, Gaithersburg, Maryland 20760.
Purpose: To rate 3-year olds on their ability to exhibit seven different creativity components; and to compare these ratings with their watching of children's TV programs.
Subjects: 11 girls and 6 boys, age 3, attending preschool together, primarily from middle class families.
Methods: ***Sesame Street*** and ***Mister Rogers' Neighborhood*** TV programs were evaluated on the basis of seven creativity components. Four tasks were taken from these programs and given individually to the 17 children to try to determine the ability of 3-year olds to exhibit the creativity components. The children's TV watching habits were compared with their scores on the tasks. In addition, teachers' ratings of children's flexibility were compared with task scores.
Findings: There was statistical correlation of the teachers' ratings of the children's flexibility with their scores on fluency and elaboration. The children performed less well on the divergent thinking and transformation tasks than on the other five components. Girls scored better on the verbal tasks, and boys scored better on the manipulative tasks. There was no correlation of tasks with television watching.
Duration: September 1977-completed.
Cooperating group(s): University of Maryland.
Publications: A paper is available from the ERIC Document Reproduction Service.

41-FE-3 EFFECTS OF COMMERCIAL FORM AND PLACEMENT ON CHILDREN'S ATTENTION AND SOCIAL BEHAVIOR

Investigator(s): Richard Potts, B.A., Graduate Research Assistant; and Douglas Greer, B.G.S., Graduate Teaching Assistant, Department of Human Development and Family Life, University of Kansas, Lawrence, Kansas 66045.
Purpose: To determine how noncontent formal properties of TV commercials and their placement in a program influence children's attention to them; and to determine the effect of these various formats on children's postviewing social behavior.
Subjects: 32 boys and 32 girls, ages 3, 4, and 5, enrolled in the University of Kansas Preschool.
Methods: Same-sex pairs of subjects viewed a children's program segment which contained 5 minutes of commercials. These commercials were either high or low on formal features (e.g., camera techniques, action of characters, scene change, and auditory features) and were placed in the program in either a clustered arrangement before and after the program, or were dispersed throughout the program. Subjects participated in a free play session 1 to 3 days before viewing and another play session immediately after viewing. Their play behavior and attention to the program were videotaped and scored.

Findings: Boys watched significantly more than did girls in all conditions. Commercials in the dispersed format elicited significantly more attention from all subjects than did the same commercials in a clustered format. Subjects viewing commercials with high formal features exhibited significantly more serious aggression (physical, verbal, and object-directed) than did subjects viewing low formal feature commercials. Boys exhibited more fantasy-oriented aggression than girls, and boys showed more fantasy role playing than girls, regardless of experimental condition.
Duration: Spring 1977-July 1978.
Cooperating group(s): Center for Research on the Influence of Television on Children funded by the Spencer Foundation, Chicago.
Publications: Information is available from the investigators.

41-FE-4 TWO SEASONS OF FAMILY ROLE INTERACTIONS ON COMMERCIAL TELEVISION

Investigator(s): N. Buerkel-Rothfuss, M.A., Graduate Assistant; Bradley S. Greenberg, Ph.D., Professor and Chairman; and K. Neuendorf, B.A., Graduate Assistant, Department of Communication, Michigan State University, 524 South Kedzie Hall, East Lansing, Michigan 48824.
Purpose: To analyze the content of family role structures and family role interaction patterns of U.S. television families during the years 1975-76 and 1976-77.
Methods: One episode was videotape recorded of each weekly family-centered fictional TV series aired by three major networks during prime time evening or Saturday morning during 1975-76 and 1976-77. In addition, the Year 1 shows included one episode of all other weekly entertainment series. In total, 53 shows were analyzed in Year 1; 28, in Year 2. Undergraduates were used as coders. Two Year 1 coders returned to complete the Year 2 analysis. Interrater reliability estimates were obtained both years for shows judged to be fairly complex.
Findings: Results to date: (1) One-third to one-half of the shows across the two seasons included some type of family unit; however, the vast majority of fictional TV characters had no relatives on the shows. (2) There are three basic types of TV families: (a) The nuclear family, with two parents and one or more children. This type of family comprised 40% of all TV families in each season. (b) Single-parent family plus children. In each season, this type of family reflected one-fourth of all TV families. (c) Husband-wife family without children. In the first season, such families comprised 23% of all families; in the second season, this figure dropped to 15% in the subset of shows analyzed. (3) Divorce was not found with any frequency. In both seasons, approximately 60% of the adults were in their first marriage and 25% had never been married. (4) The most commonly interacting pair was the husband and wife. Each did the same amount of initiating and receiving family role interactions. (5) Same-sex parent-child interactions occurred more consistently in both seasons than did opposite-sex parent-child interactions. (6) Males and females appeared equally often and had equivalent role capacities for whatever activities engaged them. (7) The mode of family role interaction most often observed in TV was that of offering information. Husbands tended to make more contributions to family role interactions than did their wives. In both seasons, wives tended to be more likely to seek support in family role interaction. (8) The behaviors of opposing and attacking occurred most frequently in husband-wife dyads. Husbands were more likely to initiate opposing behaviors, and wives were more likely to initiate attacking behaviors.
Duration: October 1975-March 1978.
Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.
Publications: Buerkel-Rothfuss, N. ***et al.*** Two seasons of family role interaction on commercial television. Department of Communication, Michigan State University, 1978.

41-FE-5 CHILDREN'S PERCEIVED REALITY OF TV AND THE EFFECTS OF PRO- AND ANTI-SOCIAL TV CONTENT ON SOCIAL BEHAVIOR

Investigator(s): Byron Reeves, Ph.D., Assistant Professor, Department of Journalism and Mass Communication, University of Wisconsin, Madison, Wisconsin 53706.
Purpose: To examine the role of children's perceived reality of TV in explaining the effects of TV on eight behaviors: three antisocial behaviors (physical aggression, verbal aggression, deceit) and five prosocial behaviors (altruism, affection, expressing feelings of others and self, and reparation).
Subjects: 721 white students in 4th, 6th, and 8th grades (equal numbers of girls and boys) from lower, middle, and upper middle class backgrounds.
Methods: Questionnaires were administered to the 4th and 6th graders in a group on 2 successive days for 40 minutes each day. Eighth graders were interviewed in one 50-minute period. The variables used in this research were (1) a TV exposure index for each of the eight behaviors, (2) an index of the children's perceived reality of TV, and (3) eight behavioral indices that were used as dependent variables.
Findings: As a general orientation to TV, perceived reality was not useful in accounting for variance in the behaviors. Two dimensions of perceived reality – the reality of pro- vs. antisocial aspects of TV – were better predictors of behavior than a general reality index. The prosocial reality factor significantly increased the prediction of prosocial behaviors for the 4th graders and significantly increased the prediction of antisocial behaviors for the 8th graders. Prosocial reality was a positive predictor of prosocial behavior and a negative predictor of antisocial behavior. The antisocial reality factor did not affect the prediction of any of the behaviors.
Duration: Spring 1976-completed.
Cooperating group(s): (1) University of Wisconsin, Graduate School. (2) Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.
Publications: Reeves, B. Children's perceived reality of television and the effects of pro- and anti-social TV content on social behavior. Department of Communication, Michigan State University, 1977.

41-FE-6 PROSOCIAL AND ANTISOCIAL BEHAVIORS ON COMMERCIAL TV IN 1975-76

Investigator(s): Bradley S. Greenberg, Ph.D., Professor and Chairman; and Charles K. Atkin, Ph.D., Associate Professor, Department of Communication, Michigan State University, 524 South Kedzie Hall, East Lansing, Michigan 48824.
Purpose: To determine the quantity and quality of pro- and antisocial programming on television.
Methods: One episode in all 1975-76 prime time and Saturday morning TV series was videotaped for analysis. They comprised 92 programs and 68.5 hours of TV. Mid-season replacement series were also videotaped and included in the analysis. Variety shows, movies, and public affairs programs were excluded. Nine undergraduates were used as coders of the pro- and antisocial content behavior. An intensive training program was developed and carried out until all coders (1) understood and agreed upon the conceptualization of the behaviors, (2) used the same criteria for determining the presence of the behaviors, and (3) were able to clearly differentiate one behavior from another.
Findings: Results to date: (1) For each hour of TV, an average of 84 acts were coded: 43 were prosocial, 41 were antisocial. Verbal aggression accounted for 23 of the hourly antisocial acts; physical aggression for 14; and deceit for 4. Altruism and expressing one's feelings each accounted for 13 prosocial acts per hour; affection for 8; and dealing with others for 10. (2) Antisocial acts occurred most frequently in the Saturday morning time period – 50 per hour. During the family hour and from 9 to 11 PM, there were nearly 40 antisocial acts per hour. Prosocial acts occurred most frequently during family hour at a rate of 49 per hour, 44 per hour from 9 to 11 PM, and 30 per hour on Saturday morning. (3) By program type, cartoons were the most antisocial, with 60

acts per average hour, half of which were acts of physical aggression. Family dramas and Saturday morning noncartoon shows averaged 30 antisocial acts per hour. Cartoons contained the lowest rate of prosocial behavior, 29 per hour; situation comedies were the most prosocial, averaging 63 per hour. (4) Motives are evident for the majority of all antisocial acts. These motives are almost exclusively for material gain. A small proportion of the motives are achieved. Motives are less evident for prosocial behavior.

Duration: October 1975-completed.

Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

Publications: Greenberg, B.S. ***et al.*** Pro-social and anti-social behavior on commercial television in 1975-76. Department of Communication, Michigan State University, 1977.

41-FE-7 PARENTAL MEDIATION OF CHILDREN'S SOCIAL BEHAVIOR LEARNING FROM TELEVISION

Investigator(s): Bradley S. Greenberg, Ph.D., Professor and Chairman; and Charles K. Atkin, Ph.D., Associate Professor, Department of Communication, Michigan State University, 524 South Kedzie Hall, East Lansing, Michigan 48824.

Purpose: To analyze children's learning of prosocial and antisocial behaviors from television in the family context.

Subjects: 721 white students in grades 4, 6, and 8 (equal numbers of boys and girls) from lower, middle, and upper middle class backgrounds, and a random sample of 293 of their mothers.

Methods: Questionnaires were administered to the 4th, 6th, and 8th graders. This was supplemented by personal interviews with their mothers. In some classrooms, observational ratings of respondents' behavior were obtained from peers and teachers.

Findings: The relationship between TV content exposure and corresponding behavior patterns was consistently positive, although modest in strength. Older children in the 8th grade learn more antisocial behavior per unit of exposure than younger children. Younger children learn the most from prosocial exposure. Girls are more affected by prosocial content, and boys are more influenced by antisocial programming. The more parents make appropriate statements, the more the child tends to behave accordingly in direct response. Children who hear parental disapproval and warnings about the unacceptability of verbal aggression seem to be uninfluenced by TV, while viewing is related to verbal aggressiveness for other children. Moreover, if parents approve and recommend the altruistic and affectionate activities on TV, there is a stronger exposure-behavior relationship than if such commentary is infrequent. Amount of joint parent-child exposure is a much more significant factor than amount of discussion in mitigating aggressive behavior in young viewers. Mediation is consistently more effective for 4th graders; younger children are more responsive to parental interpretation.

Duration: April 1976-completed.

Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

Publications: Atkin, C.K. and Greenberg, B.S. Parental mediation of children's social behavior learning from television. Department of Communication, Michigan State University, 1977.

41-FE-8 A THREE-SEASON ANALYSIS OF THE DEMOGRAPHIC CHARACTERISTICS OF FICTIONAL TELEVISION CHARACTERS

Investigator(s): Bradley S. Greenberg, Ph.D., Professor and Chairman; Katrina W. Simmons, Ph.D., Assistant Professor; Linda Hogan, B.A., Undergraduate Assistant; and Charles K. Atkin, Ph.D., Associate Professor, Department of Communication, Michigan State University, 524 South Kedzie Hall, East Lansing, Michigan 48824.

Purpose: To identify what television provides about the demographic composition of its fictional population.

Methods: A composite week of national network TV shows during family hour (8 to 9 PM), later prime time (9 to 11 PM), and Saturday morning (8 AM to 12:30 PM) was constructed in fall 1975, 1976, and 1977. One episode was videotaped of each regular series shown during those hours. In addition, replacement shows were included in the analysis. Specials, sports events, variety shows, and network movies were excluded from the analysis. Each season the coding teams consisted of four to six undergraduate students. During an initial session, teams of two coders were introduced to the project, its scope, and purposes. After coders had completed a practice session, they independently viewed and coded the same set of shows until intercoded reliabilities reached .80 for all categories. When coding reached this level of reliability, shows were viewed by a single coder.

Findings: Women continue to be an important minority in TV fiction, although outnumbered by three to one. They are primarily young and pretty and are over-represented in lower socioeconomic status and jobs. Portrayals of racial minorities continue to be especially interesting: (1) Spanish-Americans still do not exist with any kind of frequency; and (2) the presentation of blacks, at least in terms of their quantity, has been level for close to a decade at about 10%. Young people are disproportionately females and blacks. The elderly are far less likely to include women among their number than men, and there are virtually no elderly black people to be seen in fictional TV series. The SES characteristics of the TV population reflect a strong emphasis on the upper level SES categories; i.e., professionals, managers, etc. The proportion of females in the total sample did not vary substantially across the three seasons, ranging from 27% in the first year analyzed to 29% in the most recent year. The proportion of females who broke the law (one-third that of male lawbreakers) was substantially under-represented in two of the three seasons, and the proportion of blacks who were lawbreakers was less than the proportion of whites. By age category, lawbreaking has diminished in the under-20 age group and has shown a parallel increase in the age group of 50 to 64.

Duration: October 1975-May 1978.

Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

Publications: Greenberg, B.S. *et al.* A three-season analysis of the demographic characteristics of fictional television characters. Department of Communication, Michigan State University, 1978.

41-FE-9 EFFECTS OF PARENTAL RESTRICTIONS ON TV VIEWING

Investigator(s): Sharon Gadberry, Ph.D., Associate Professor; and Mary Schneider, Graduate Student, Department of Psychology, Adelphi University, Garden City, New York 11530.

Purpose: To investigate whether motivated mothers are capable of restricting home television viewing and whether the restrictions change children's behavior predictably.

Subjects: 30 middle class mothers and their first grade children.

Methods: Mothers volunteered to alter home activities of their children. After pretesting, subjects were paired as closely as possible on IQ, age, sex, maternal childrearing attitudes, neighborhood, and TV viewing, and then were assigned randomly. To avoid a placebo effect, mothers in both groups were assigned special conditions expected to improve behavior. For 6 weeks, experimental mothers (TV-restricted) provided 16 minutes a day of parent contact time, limited viewing time, and restricted commercial viewing. Control mothers provided the same amount of contact time but were not asked to limit TV. Wechsler Preschool and Primary Scale of Intelligence verbal and performance IQs were administered 3 months prior to the study and 1 week subsequent to the experimental conditions. Postmeasures included the Matching Familiar Figures Test, IT Scale for Children, Hypothetical Situations Interview, and a Shopping Game. One of five undergraduate psychology students visited all parents weekly and collected weekly reports of TV time, contact time, and behavioral ratings. They encouraged mothers to maintain the respective conditions.

Findings: The study supports the notion that mothers motivated to optimize their children's performance are capable of modifying their socialization practices effectively. Significantly different behaviors, predicted by past research, were observed between controls and TV-restricted groups. Reducing TV significantly decreased impulsivity, sex role difference, aggression scores, and money spent on advertised items. Performance, but not verbal, IQs increased more in the TV-restricted group. Results support the feasibility and effectiveness of home control of TV viewing.
Duration: September 1977-March 1978.

41-FE-10 HOW CHILDREN PERCEIVE TELEVISION VIOLENCE

Investigator(s): Pamela Werton Dalton, Ed.D., Professor, Division of Education, Linfield College, McMinnville, Oregon 97128; and Peggy Jo Gray, Ed.D., Assistant Professor, Division of Education, University of Texas, San Antonio, Texas 78285.
Purpose: To analyze children's attitudes toward violence on television.
Subjects: 1,289 children, ages 5 to 16, were selected randomly from the 17 public school districts in the San Antonio area.
Methods: Data were collected through one-to-one interview questionnaires. Summary tabulations were made to determine children's definitions of television violence and the interpretation of violence being rewarded or punished.
Findings: To date the statistics indicate that children can separate fantasy from reality. The children surveyed had a definition for violence, although it ranged from yelling to killing. The majority see violence as being punished on television and feel violence is never justified. What the children found frightening on TV were horror movies and monsters. A large portion of the children surveyed watched and discussed TV programs with their parents.
Duration: September 1977-August 1978.

41-FE-11 SOME EFFECTS OF TELEVISION ON MOTHER-CHILD INTERACTIONS

Investigator(s): Faye B. Steuer, Ph.D., Assistant Professor, Psychology Department, College of Charleston, Charleston, South Carolina 29401.
Purpose: To examine some of the ways in which TV influences interactions between mothers and children in a laboratory setting.
Subjects: Study I: 29 mothers and their 3-year-old girls and boys. Study II: Mothers and their 6-year-old girls and boys.
Methods: In each study, half of the subjects were observed in a waiting room with a television set operating; the other half of the children were observed with the TV turned off. Observers noted several nonverbal behaviors of mother and child using time sampling techniques. 0 reliability measured each session; only 100% reliable data were included in the analysis of variance.
Findings: Results from the first study, using 3-year-old children only, show that mothers in the TV condition look at children less than those in the no TV condition. While smiling on the part of mothers and children did not differ significantly in the two conditions, mutual smiling between mother and child occurred less frequently with TV on than with it off.
Duration: Summer 1977-Summer 1978.
Cooperating group(s): College of Charleston Foundation.
Publications: A paper presented at the Southeastern Conference on Human Development, Atlanta, Georgia, April 1978: Steuer, F.B. Some effects of television on mother-child interactions.

41-FE-12 TELEVISION VIEWING AND IMAGINATIVE PLAY IN PRESCHOOLERS: A DEVELOPMENTAL AND PARENT INTERVENTION STUDY

Investigator(s): Jerome L. Singer, Ph.D., Professor; and Dorothy G. Singer, Ph.D., Visiting Professor, Family Television Research and Consultation Center, Yale University, 405 Temple Street, New Haven, Connecticut 06511.

Purpose: To study the relationships between play and concurrent language usage and the child's patterns of television viewing at home.

Subjects: 141 preschoolers, ages 3 to 4, matched for IQ in approximately equal sex groups.

Methods: Parents were assigned randomly to one of three intervention groups or to a control group. Three intervention groups received training for 1 year in one of the following areas: (1) in stimulating the children's imaginative play, (2) in stimulating the child's cognitive and language development, or (3) in controlling the child's television viewing frequency and encouraging more discriminating use of the set. The control group merely kept logs of the children's viewing just as did the other parents. Data were collected through observations in free play periods. Pre-experimental instruments included the Peabody Picture Vocabulary Test, Predisposition to Fantasy Test, Baron Ink Blot Test, and the Television Questionnaire Test. Parents filled out TV questionnaires, background data sheets, and imaginary playmate questionnaires. Statistical evaluation measures included analysis of variance, factor analysis, multiple regression equations, and path analysis.

Findings: A significant correlation was found between heavy TV viewing and aggression. Light TV viewers report significantly more imaginary playmates, are more advanced in language usage, and reflect more positive emotions (e.g., interest, curiosity, and joy). Light TV viewers also interact more and share and cooperate more with other children.

Duration: October 1976-May 1978.

Publications: A project report is available from the investigators.

41-FE-13 STUDIES OF TELEVISION IN YOUTH SPORTS

Investigator(s): Dick Moriarty, Ph.D., Director, Sport Institute for Research/Change Agent Research, Faculty of Human Kinetics; Ann McCabe, Ph.D., Professor of Psychology; and Larry Leduc, Ph.D., Professor of Political Science, University of Windsor, Windsor, Ontario, Canada N9B 3P4.

Purpose: To assess the effects of prosocial and antisocial TV exposure on the behavior of children and youth involved in sports or athletics.

Subjects: Children, ages 7 through 17, involved in amateur sports in Southwestern Ontario. 255 children were involved in hockey (152 male players); lacrosse (45 male players); and baseball (44 male and 14 female players). In addition, 4,000 Canadian subjects, age 18 and older, were interviewed to assess their perceptions of the effects of televised aggression on their family members.

Methods: The investigator attempted to combine the field and laboratory approaches to aggression research in one experiment. In the initial stage, the general design consisted of collecting questionnaire data and observing the subjects' behavior on the playing field. Children were shown videotaped presentations of their sport, which were edited to be relatively prosocial or antisocial according to the group to which the subjects had been assigned. Following the presentations, the subjects' behavior on the field was observed again. In order to identify the subjects' attitudes, beliefs, TV viewing habits, and behavior, a written questionnaire was distributed which included (1) a Players' Questionnaire, which provided information on subjects' age, sex, sport; number of hours they spent watching TV during summer and winter; time of day they watched TV; and ranking their 1st and 2nd choices of types of shows, sports programs shown regularly, and programs shown occasionally. (2) Project Competition Concern (13 forced-choice questions) provided respondents an opportunity to express their attitudes and beliefs in terms of support for professional athletics as opposed to amateur/school sports. (3) In a TV Diary Index the subjects listed TV shows they had viewed, the frequency and motivation for viewing, their feelings while viewing,

and their parents' attitude and behavior while they viewed the shows. Before the baseball, lacrosse, and hockey schedules had begun, a core staff of observers developed coding forms for each sport. Provisions were made in the form for qualitative and quantitative assessments of observed prosocial or antisocial behavior. All major categories of behavior that were recorded on the form were operationally defined by the core observation staff. Observation periods were defined separately for the three sports.

Findings: A relationship was found between exposure to prosocial media and high level prosocial behavior, while exposure to antisocial media had no effect. The public attitudes survey showed that over 50% of the respondents indicated that TV athletic aggression affects their family members not at all (38%) or a little (17%). TV occupied a large portion of the life of the children involved in sports (average time: 25 hours a week), and their main interests are sports, cartoons, and comedy shows. Children participate in sports/athletics for the skill, for the game itself, and for fun and enjoyment; and least like playing aggression, drill and practice, and losing. Most children involved in sports prefer the amateur sport model as opposed to the professional athletic model in terms of organization and administration of sports/athletics. Energy and resources should be utilized to encourage mass media to depict and emphasize prosocial models and positive behavioral aspects of sports and physical activities. Where TV athletic aggression is a problem, 70% of the general public indicate that the athletic organization should regulate the aggressiveness. Only a minority favors control by government (11%) or TV network (10%), or combined responsibility (8%).

Duration: Completed.

Cooperating group(s): Ontario Royal Commission on Violence in the Communications Industry.

Publications: Moriarty, D. and McCabe, A. Studies of television in sports. In ***Learning from the media.*** Toronto, Ontario: The Ontario Royal Commission on Violence in the Communications Industry, 1978.

41-FE-14 NONVERBAL SENDING ACCURACY AND RECEIVING ABILITY IN PRESCHOOL CHILDREN

Investigator(s): Stephen Alper, M.A., Family Service Association of Brown County, Inc., Green Bay, Wisconsin 54301; and Ross W. Buck, Ph.D., Associate Professor; and Albert S. Dreyer, Ph.D., Professor, Communication Division, U85, University of Connecticut, Storrs, Connecticut 06268.

Purpose: To investigate the relationship between nonverbal sending accuracy (measured by Buck's (JPSP, 1975; 1977) slide-viewing paradigm) and nonverbal receiving ability (measured by the ability to guess the emotions portrayed in posed photos) and a children's form of the Communication of Affect Receiving Ability Test (CARAT-C); and to develop and test the CARAT-C.

Subjects: 20 girls and 12 boys (median age, 50 months) from the University of Connecticut Child Care Center served as subjects in the receiving ability study. Ten of the girls and six of the boys served subsequently as subjects in the sending accuracy study.

Methods: The children were tested on the CARAT-C instrument and the posing test during the first semester. The CARAT-C involves watching TV sequences of children watching slides and guessing what kind of slide they are watching. During the second semester, sending accuracy was measured by the slide-viewing technique: the child watched a series of slides (familiar people, unfamiliar people, unpleasant, and unusual) while being observed over TV by a parent, and later by undergraduates, who tried to guess what kind of slide was being viewed

Findings: The CARAT-C instrument showed significant nonverbal receiving ability, as did the posing test. Sending accuracy was negatively related to the former ($r = -.60$, $p < .025$) but positively related to the latter ($r = +.43$, $p < .10$).

Duration: Fall 1976-Spring 1978.

Cooperating group(s): University of Connecticut Research Foundation.

Publications: (1) Alper, S.; Buck, R.W.; and Dreyer, A.S. Nonverbal sending accuracy and receiving ability in preschool children (in preparation). (2) Buck, R.W. and Alper, S. CARAT-C: A measure of nonverbal receiving ability for preschool children, 1978.

41-FE-15 FORMAL AND INFORMAL MEANS OF ASSESSING THE COMMUNICATIVE COMPETENCY OF KINDERGARTEN CHILDREN

Investigator(s): Janet K. Black, Ph.D., Assistant Professor, Department of Elementary Education, 304 Carlisle Hall, University of Texas, Arlington, Texas 76019.

Purpose: To investigate the merit and feasibility of the evaluation of kindergarten children's language (communicative competence) in the social context of the natural classroom in comparison with standardized language tests.

Subjects: Seven girls and five boys attending kindergarten: 10 white, 1 Black, and 1 Oriental. The children's parents were considered professionals.

Methods: Communicative competence, as defined in this investigation, has two aspects: grammatic competence and interactional competence. In the first phase of the study, grammatic competence was measured by the kindergarten child's syntactic maturity, vocabulary diversity, and use of irregular inflections in three oral language samples. The second phase of the investigation concerned the assessment of interactional competence. Pinnell's (1975) categorization of the functions of language was applied to the three evaluative approaches to determine the number of functions elicited by standardized tests (Illinois Test of Psycholinguistic Abilities and Circus 10) and the natural environment of the sociodramatic area of the classroom. In addition, oral language samples (collected from the sociodramatic area via two tape recorders, a videotape, and the researcher's notes) were analyzed according to the Interactional Competency Checklist. The Checklist was designed by the investigator and based on the work of other researchers: Cicourel (1972); Hymes (1971); Lewis and Cherry (1975); Mishler (1976); and Schegloff and Sacks (1973). The Interactional Competency Checklist consists of four categories: (1) the ability to adapt to changes in the setting, (2) nonverbal appropriateness, (3) familiarity with normal constraints and conditions of conversation, and (4) sequencing.

Findings: Analysis of the data suggests that the formal means of assessment used in this investigation provided limited and inaccurate information about a child's grammatic competence and provided no information regarding the child's interactional competence. However, the sociodramatic area generally provided more comprehensive and accurate information about the child's total communicative competence (grammatic and interactional).

Duration: September 1976-completed.

Publications: Black, J.K. Kindergarten children's communicative competence. In O. Garnica and M. King (Eds.), ***Language, children and society.*** Elmsford, New York: Pergamon Press, Inc., 1978.

SPECIAL GROUPS OF CHILDREN

Physically Handicapped

41-GA-1 MUSCATINE FAMILY STUDIES PROGRAM

Investigator(s): Helmut G. Schrott, M.D., Lipid Research Clinic, Department of Medicine, University of Iowa, Iowa City, Iowa 52242.
Purpose: To study the familial aggregation and inheritance of coronary risk factors.
Subjects: Between 4,000 and 5,000 family members of school children who have different blood lipid levels or different blood pressures.
Methods: The researcher used the family study method to examine all first and second degree relatives.
Findings: Data indicate increased coronary mortality in relatives of hypercholesterolemic school children and no increased coronary mortality in relatives of hypertriglyceridemic children.
Duration: June 1974-June 1978.

41-GA-2 THE EFFECTS OF CAMPING ON HANDICAPPED CHILDREN

Investigator(s): Marlys M. Mitchell, Ph.D., Director, Occupational Therapy Division, Medical School, Wing B 207H, University of North Carolina, Chapel Hill, North Carolina 27514.
Purpose: To study the effect of a summer camping program on handicapped children; specifically, to evaluate the children's activities of daily living, motor development, sensory development, and self-concept.
Subjects: Each year for 3 years, approximately 60 children, ages 9 to 14, were included in the study. All children were handicapped with a variety of handicaps – some wheelchair-bound, some ambulatory.
Methods: The Piers-Harris Self-Concept Scale and an abbreviated version of the Adaptive Behavior Scale were administered to the children as a pretest prior to camp, as a posttest on the final day of camp, and as a post posttest 3 months following the camping experience. No specific intervention was initiated, but cabin counselors maintained a project-developed Camper Log of skills. A control group of children did not attend camp, but all tests were administered to them. A series of t-tests and analyses of variance determined differences among and between groups. Analyses were by cabin, by sex, by disability, by times at camp, and by age on each of the measures employed.
Findings: Some significant differences were found on each of the measures for some of the groups.
Duration: Summer 1975-completed.
Cooperating group(s): National Easter Seal Research Foundation.
Publications: (1) Mitchell, M. ***Camper log.*** Camp Easter-in-the-Pines, 1977. (2) Mitchell, M. ***Trainer's manual for the training of camp counselors.*** Camp Easter-in-the-Pines, 1977.

41-GA-3 ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH

Investigator(s): Michael A. Karchmer, Ph.D., Director; Brenda W. Rawlings, Senior Research Associate; and staff, Office of Demographic Studies, Gallaudet College, 7th and Florida Avenue, N.E., Washington, D.C. 20002.
Purpose: To provide, on a national scale, information on the hearing impaired student population through college age in the United States.

Subjects: Hearing impaired children, birth through college age, who are receiving special educational services. During the 1977-78 year, data were collected on over 50,000 individuals.
Methods: The foci of the various studies conducted are on topics of general concern to those interested in the education of hearing impaired children. This includes demographic information on the characteristics of the students and their families, information on the facilities and services available to the hearing impaired, and analysis of achievement and intelligence test data of hearing impaired students. The data are collected through mail surveys, and most information is provided by the schools. In other studies, data may be collected through mail surveys directly to parents of hearing impaired children. The Stanford Achievement Test, which has been modified for hearing impaired students, is the testing instrument that has been used in the studies of academic achievement.
Duration: 1966-continuing.
Cooperating group(s): U.S. Department of Health, Education, and Welfare.
Publications: The findings to date have been published in a series of monographs and national journals. A list of publications is available from the investigators.

41-GC-1 NONVERBAL COMMUNICATION, SOCIAL INTERACTION, AND USE OF SPACE IN DEAF CHILDREN

Investigator(s): Terry L. Maple, Ph.D., Assistant Professor, Department of Psychology, Emory University, Atlanta, Georgia 30322.
Purpose: To utilize naturalistic observation and videotape techniques in a developmental study of facial expressions, emotion, social interaction, movement, communication, and use of space in a population of deaf children.
Subjects: Children, ages 3 to 16, are being followed. Presently, the sample includes both male and female 3-year olds with varying degrees of deafness.
Methods: On-the-spot behavior records using a focal subject technique are used daily. A major source of data is frame-by-frame analysis of motion picture sequences from videotaped records. A cluster analysis and sequential analysis statistical treatment is anticipated for some of the normative problems which are addressed.
Findings: Preliminary results suggest that bodily orientation in deaf children differs from that of hearing children, related, it is believed, to different communicative modes.
Duration: February 1978-continuing.
Cooperating group(s): Atlanta Area School for the Deaf.
Publications: A paper presented at the symposium, "Nonverbal Communication in Monkeys, Apes, and People," at the Southeast Society for Child Development Conference, Atlanta, April 1978; Nirk, M.; Young, E.; and Maple, T. Nonverbal communication in three year old deaf children. Copies of the paper are available from the investigator.

41-GC-2 TACTUAL DISCRIMINATION OF SHAPES

Investigator(s): Katherine Simpkins, Ph.D., Educational Research Scientist, American Printing House for the Blind, 1839 Frankfort Avenue, Louisville, Kentucky 40206.
Purpose: To identify some of the concepts developed by young children in spatial concepts through tactual recognition of shapes.
Subjects: Three groups of 16 children each: blind, partially sighted, and sighted children, ages 4 to 7. There were eight girls and eight boys in each group, and the children had no previous or 1 year previous schooling and had no additional handicaps. The blind children had no useful vision.
Methods: Based on the work of Jean Piaget and associates, the topological relationships used by sighted children were compared with those employed by blind and partially sighted children. Each child was asked to examine a topological shape tactually and to locate tactually the same shape among four alternatives.

Findings: Significant differences were found for the main effect of schooling and for the interaction effects of vision and schooling and for vision, schooling, and sex. In examining the importance of topological concept, children in all vision categories and on both levels of schooling chose topologically similar options when an incorrect choice was made.
Duration: September 1977-March 1978.
Cooperating group(s): (1) American Printing House for the Blind, Department of Research. (2) Philadelphia Public Schools. (3) Overbrook School for the Blind. (4) New Jersey Commission for the Blind. (5) Delaware Commission for the Blind. (6) Montgomery County Maryland Schools. (7) Indiana School for the Blind. (8) Cleveland Ohio Schools. (9) Kentucky School for the Blind. (10) Nebraska School for the Blind. (11) Nebraska Department of Education.

41-GC-3 TACTUAL DISCRIMINATION OF HOUSEHOLD OBJECTS

Investigator(s): Katherine Simpkins, Ph.D., Educational Research Scientist, American Printing House for the Blind, 1839 Frankfort Avenue, Louisville, Kentucky 40206.
Purpose: To examine aspects of elementary spatial concepts through actual recognition of objects.
Subjects: 24 blind, partially sighted, and sighted children, ages 4 to 7, with no previous schooling and no additional handicap; and 24 blind, partially sighted, and sighted children, ages 4 to 7, with 1 year of previous schooling and no additional handicap.
Methods: Subjects were asked to examine tactually a common household object from one of six rooms in a house. Objects were rated by parents as to degree of familiarity. The child had to locate the same or a similar object from among three alternates.
Findings: No differences were found between the vision groups (blind, partially sighted, or sighted), schooling (0 or 1 year), sex, or familiarity. Differences were found between type of identification required (same or similar) and the room categories (living, bath, kitchen, etc.).
Duration: September 1977-March 1978.
Cooperating group(s): (1) American Printing House for the Blind, Department of Research. (2) Philadelphia Public Schools. (3) Overbrook School for the Blind. (4) New Jersey Commission for the Blind. (5) Delaware Commission for the Blind. (6) Montgomery County Maryland Schools. (7) Indiana School for the Blind. (8) Kentucky School for the Blind. (9) Cleveland Ohio Schools. (10) Nebraska School for the Blind. (11) Nebraska Department of Education.

41-GC-4 THE BLIND CHILD'S CONSTRUCTION OF THE PROJECTIVE STRAIGHT LINE

Investigator(s): Katherine Simpkins, Ph.D., Educational Research Scientist; and Anthony Siegel, B.A., Research Assistant, American Printing House for the Blind, 1839 Frankfort Avenue, Louisville, Kentucky 40206.
Purpose: To determine how blind children solve the problem of the construction of the projective straight line.
Subjects: 30 blind children, ages 6 to 11, with no other handicap, having light projection or less.
Methods: Based on the studies of Jean Piaget and associates, the construction of the projective straight line indicated the child's movement from topological to projective and Euclidean understandings of space. In this study, the subject was asked to construct a straight line between two toy barns with small fenceposts that were weighted. The constructions consisted of (1) horizontal along the edge of a rectangular base, (2) horizontal across the center of the rectangle, (3) oblique between two corners of the rectangle, (4) horizontal near the edge of the circular base, (5) horizontal across the diameter of the circle, and (6) oblique on the circular base.
Findings: Contrary to the findings with sighted children, there were no differences between the horizontal constructions and the obliques. The median age for the blind subjects was approximately 2 years older than sighted children for the horizontals but only 4 to 7 months for the obliques. There was no age progression with blind subjects.

Duration: April 1978-July 1978.
Cooperating group(s): (1) American Printing House for the Blind, Department of Research. (2) Arkansas School for the Blind. (3) Mississippi School for the Blind. (4) Indiana School for the Blind. (5) Louisiana School for the Blind. (6) Louisiana School for the Blind – Southern University Campus.

41-GE-1 COMPUTER ASSISTED INSTRUCTION IN LANGUAGE AND READING IN DEAF CHILDREN

Investigator(s): Gary C. Galbraith, Ph.D., Professor, Department of Psychiatry, University of California, Los Angeles, California 90024. Address correspondence to: Pacific State Hospital, Research Group, 3530 Pomona Boulevard, P.O. Box 100-R, Pomona, California 91766; and Robert K. Lennan, Superintendent, California School for the Deaf, 3044 Horace Street, Riverside, California 92506.
Purpose: To develop effective computer assisted instruction (using computer graphics) for teaching deaf children basic language and communication skills.
Subjects: 26 hearing impaired girls and boys, ages 10 to 14, attending public schools.
Methods: A portion of a standard English textbook used in local school districts, ***Building Blocks for Developing Basic Language,*** was implemented on a digital computer (with color graphic capabilities). This involved a 200-word dictionary (written words, sign language, and spoken language). To use this computerized curriculum, as the visual displays appeared, the child indicated responses by a variety of means (keyboard, touching a response panel, etc.). A control group of local public school children (standard instruction only) was matched with the experimental group of hearing impaired children (instruction plus computer assisted instruction). Comparisons will be made using posttests and teacher evaluations. If successful, the CAI program will be made available to other facilities by phoneline connections.
Duration: January 1978-December 1978.
Cooperating group(s): Bureau of Education for the Handicapped; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare.

41-GE-2 THE EFFECTS OF HEARING AIDS ON AUDITORY SENSITIVITY IN CHILDREN

Investigator(s): Sidney L. Schoenfeld, M.S., Director of Audiology; and Robert Huskey, Ph.D., Assistant Superintendent, Special School District, 12110 Clayton Road, St. Louis, Missouri 63131.
Purpose: To investigate the possible effects of amplification on temporary and permanent threshold shift.
Subjects: 17 girls and 7 boys, ages 3 to 13, who were hearing impaired and first time hearing aid users.
Methods: Subjects were tested twice daily for a minimum of six tests to determine baseline thresholds. They were then aided monaurally and tested twice daily for 2 weeks, once weekly for 14 weeks, and once monthly for the remaining 20 months of the 2-year study. The theory of relative threshold shift was employed using the nonaided ear as a control. Significant relative threshold shift was 15dB or greater.
Duration: July 1975-June 1978.
Cooperating group(s): National Institute of Neurological and Communicative Disorders and Stroke; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-GE-3 EARLY EDUCATION FOR SPEECH AND HEARING HANDICAPPED OUTREACH PROGRAM

Investigator(s): Louis J. Rosso, Ph.D., Chairman, Department of Communications, Winthrop College, Rock Hill, South Carolina 29733; and Janet P. Buie, M.S., Program Coordinator, South Carolina Region V Educational Services Center, Lancaster, South Carolina 29720.

Purpose: To develop innovative and exemplary programs for speech and language impaired children.
Subjects: Approximately 200 children, ages 3 to 7, who have articulation and language disorders. The sample is divided equally between girls and boys.
Methods: A standard pre-/posttest design is used in which subjects serve as their own controls. A standardized diagnostic test battery is utilized in testing.
Findings: A significant reduction has been found in articulatory errors and discrimination errors (sound).
Duration: October 1973-June 1979.
Cooperating group(s): (1) Bureau of Education for the Handicapped; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare. (2) Handicapped Children's Early Education Program.
Publications: A curriculum guide, ALL PROGRAM, is being prepared. Information is available from the investigators.

41-GE-4 THE DEVELOPMENT OF COMPENSATORY AUDIO INPUT TO FILMS SHOWN TO CHILDREN WITH VISUAL IMPAIRMENTS

Investigator(s): Morvin A. Wirtz, Ed.D., Professor, Department of Special Education, Western Michigan University, Kalamazoo, Michigan 49007.
Purpose: To explore the feasibility of creating new sound tracks for films to provide additional audio input in substitution for visual input for visually impaired children in school settings.
Subjects: 10 blind children (braille readers); 30 partially sighted children (print readers); 30 visually perceptually handicapped children; and 30 nonhandicapped children, who are in the upper elementary school grades.
Methods: A major component of the research was determining whether or not it was feasible to revamp films. Three films were used, each analyzed for visual and auditory components. New sound tracks were created substituting auditory input for visual. Tests on each film were created and each test was balanced for knowledge or concepts based on visual (original) and auditory input. A counterbalanced design of three groups of children was tested and the results were analyzed using a 2-way ANOVA.
Findings: The films are feasible to modify from a technical point of view. The visually impaired children did greatly better with the new sound track; however, the visually perceptually handicapped group was inconclusive.
Duration: October 1977-October 1978.
Cooperating group(s): (1) CEMREL, St. Louis, Missouri. (2) Bureau of Education for the Handicapped; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare.
Publications: Reports will be submitted to the Bureau of Education for the Handicapped.

41-GE-5 AUDIO-TACTILE ANATOMY PROGRAM

Investigator(s): Paul Pietsch, Ph.D., Professor and Chairman, Department of Biological and Health Science, School of Optometry; and Randall Harris, Ed.D., Sculptor, Special Consultant, School of Education, Indiana University, Bloomington, Indiana 47401.
Purpose: To produce art and science education modules for visually handicapped and blind students.
Subjects: Blind and visually impaired students at all levels of education.
Methods: Modules consist of audio-tutorial tapes with tactile exemplars in place of conventional visual aids. Using these modules, blind and visually handicapped university students have performed equal to or better than normally sighted classmates. Modules are now being prepared for

children at the elementary and secondary levels and will be evaluated in the field by pre- and posttesting. Normally sighted control classmates will receive the same pre- and posttest examinations. Evaluations will also be made of the effectiveness of modules in mainstreamed classrooms.
Findings: Preliminary data indicate that blind and visually impaired students (when given suitable materials) learn academic subjects ordinarily presented from the visual perspective.
Duration: July 1975-Fall 1980.
Cooperating group(s): (1) American Academy of Optometry, Indiana Chapter. (2) Monroe County (Indiana) School Corporation. (3) St. Paul, Minnesota School Corporation.

41-GE-6 PATTERNS OF ENCOURAGEMENT FOR THE HANDICAPPED PRESCHOOL CHILD: A STUDY OF TEACHER PRACTICES IN NONURBAN HEAD START CENTERS

Investigator(s): Jean Durgin Harlan, Ph.D., Instructor, Child Development, Department of Human Development and Family Ecology, School of Home Economics, Ohio University, Athens, Ohio 45701.
Purpose: To determine whether relatively untrained Head Start teachers are able to give handicapped children the encouragement they may need to benefit from the Head Start mainstreaming opportunity.
Subjects: 20 Head Start teachers and teacher aides, observed as they interacted with 21 handicapped and 21 nonhandicapped children. Handicapping conditions included physical, emotional, speech, and cognitive problems.
Methods: Each teacher was observed for 3 hours in the classroom. Continuous recordings were made on a verbal category observation form. The Brophy and Good Classroom Observation Form was adapted to incorporate the orientation of the Adlerian encouragement principles. Data were treated by multivariate and univariate analysis of variance to test for differences in five major patterns of encouragement.
Findings: F values, significant at the .05 level, showed that teachers offered handicapped children more verbal encouragement and approval, support for independent action, and guidance for social interaction with peers than they offered nonhandicapped children. The teachers gave significantly less encouragement to emotionally disturbed than to other handicapped children.
Duration. September 1977-May 1978.

41-GE-7 PROJECT KIDS (KINDLING INDIVIDUAL DEVELOPMENT SYSTEMS) RESEARCH STUDIES

Investigator(s): Daniel J. Macy, Ph.D., Principal Evaluator; and Jamie L. Carter, M.S., Assistant Evaluator, Department of Research and Evaluation; and Ruth M. Turner, Ed.D., Director, Project KIDS, Department of Special Education, Dallas Independent School District, 3700 Ross Avenue, Dallas, Texas 75202; and Nanci Bray, Ed.D.; and William G. Morgan, Ed.D., Assistant Professors, Department of Special Education, University of Texas, Richardson, Texas 75080.
Purpose: To discover information needed in programming for young handicapped children and their parents; and to assess the effectiveness of such programming.
Subjects: The project serves 59 boys and 34 girls, ages 1 month to 5 years. The ethnic representation is 36% Anglo, 46% Black, and 18% Mexican-American. 30 children, ages 1 to 30 months, participate in the home-based component; 13 children, ages 15 to 47 months, participate in the center-based component; and 50 children, ages 3 through 5, participate in the school-based component. Research samples are selected from the project population as needed.
Methods: Data collection includes student IEPs, prepost scores on the Bayley Scales of Infant Development, McCarthy Scales of Children's Abilities, KIDS Inventory of Development, parent self-report questionnaires, informal checklists, and project operating records. Statistical analyses include the usual descriptive, correlational, and analysis of variance procedures generated by the Statistical Package for the Social Sciences computer routines. The strategy of a theoretical control

group is being tested in a pilot study. Since a suitable control group for the subject population is not available, an independent panel of experts is projecting student progress over a 12-month period on the assumption of no project intervention. Projections from the expert panel will constitute scores for the theoretical control.

Findings: Findings to date indicate that there was variability among children in terms of completion rates (0.0 to 6.00 objectives completed per month). There was no statistically significant relationship between completion rates and the estimated parent instructional time or length of time in the project. Objectives in the cognitive-language area generally required the least time to complete. Parents identified their needs in the areas of knowing how and where to get help for the child; having awareness of the child's limitations and strengths; understanding the child's disability and special needs resulting from the handicap; and giving firm, consistent discipline to the child. Parents expressed strength in the areas of loving the child and letting him know he is loved, accepting him as a unique and valuable individual, and giving him affection. Parents of children ages 0 to 3 and parents of children ages 3 to 6 expressed similarities in their needs and strengths ($r = .61$). Both groups of parents also expressed some specific differences in needs and strengths, but the differences were attributable to the children's age levels. Parents rated themselves significantly stronger in their competence than did the teachers ($p < .01$). All of the parents' self-reports and a majority of the teacher perceptions rated the parents at an overall competence level of average or above. In comparing the parents' self-reported strengths and needs to teachers' perceptions of the parents' needs, overall agreement was relatively low ($r = .36$). There was much variation in the amount of parent-teacher agreement, ranging from perfect to very low agreement in overall scores. A list of 69 competencies for parents of young handicapped children has been identified and prioritized by parents and professionals. While there was general agreement in parent and professional priorities, parents gave instructional competencies higher priority. Preliminary results from the theoretical control group study suggest the strategy is a feasible alternative to the usual procedure of using live control students who receive no treatment.

Duration: March 1976-June 1981.

Cooperating group(s): (1) University of Texas at Dallas, Special Education Program. (2) Bureau of Education for the Handicapped; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare.

Publications: (1) A paper presented at the Annual Meeting of the Southwest Educational Research Association, Austin, 1978: Carter, J.L. Developmental progress in young handicapped children. (2) Presentation given to the Annual Meeting of the Council for Exceptional Children, Kansas City, 1978: Carter, J.L. The assessment of competency levels of parents. (3) Presentation given to the Annual Meeting of the Council for Exceptional Children, Kansas City, 1978: Macy, D.J. Determination of parent competencies through needs assessment procedures. (4) Presentation to the Annual Meeting of the Council for Exceptional Children, Kansas City, 1978: Turner, R.M. Individualized competency based programming for parents. (5) A paper presented at the CEC National Topical Conference on Individualized Education Program Planning, Albuquerque, 1978: Turner, R.M. and Macy, D.J. A five year longitudinal study of IEP implementation.

41-GE-8 ACQUISITION AND GENERALIZATION OF TEACHING AND CHILD MANAGEMENT BEHAVIORS IN PARENTS OF PRESCHOOL HANDICAPPED CHILDREN

Investigator(s): Richard D. Boyd, M.S., Co-Director of Research; and Kathleen A. Stauber, Ph.D., Research Assistant, Portage Project, Cooperative Educational Service Agency 12, P.O. Box 564, 412 East Slifer Street, Portage, Wisconsin 53901.

Purpose: To determine whether the addition of systematic parent training strategies (Portage Parent Program) to an already proven behaviorally oriented, home-based, early intervention program (Portage Project) would significantly improve the acquisition and generalization of teaching and behavior management skills in the parents served.

Subjects: 34 families with preschool handicapped children (18 boys and 16 girls, ages 2 to 5) were assigned randomly to either Portage Model (N = 18) or Parent Program (N = 16) treatments. A nonhandicapped group (four boys and four girls, ages 2 to 4) served as a nontreatment control.
Methods: Portage Model treatment consisted of prescriptive teaching techniques and a developmental curriculum and child checklist, which the parent implemented at home. The Parent Program group used the Portage Model as a programmatic base but also utilized a checklist of parent behaviors and a set of parent readings and strategies to enhance parental acquisition of teaching and management behaviors. Observational, attitudinal, and knowledge measures were collected across all groups.
Findings: Observational data indicated significant improvement for both treatments along certain parent and child responses as compared to nontreatment control. Compared to the Portage Model parents, the Parent Program parents were better able to complete independently an instructional activity and were more knowledgeable and more confident in teaching and child management.
Duration: July 1975-June 1978.
Cooperating group(s): Bureau of Education for the Handicapped; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare.
Publications: (1) Boyd, R.D. Systematic parent training through a home based model. ***Exceptional Children*** (in press). (2) Information is available from the investigators.

41-GF-1 EVOLUTION OF CHRONIC LIVER DISEASE IN INFANCY

Investigator(s): M. Michael Thaler, M.D., Professor, Department of Pediatrics, University of California, San Francisco, California 94143.
Purpose: To determine the kinetics of biliary excretion of bile acids, bilirubin, and ^{131} 1-Rose Bengal in infants with intrahepatic and extrahepatic cholestasis.
Subjects: 50 to 100 infants, ages 0 to 6 months, with cholestatic liver or biliary disorders.
Methods: Plasma and urinary bile acids are quantitated and qualitatively characterized during evolution of neonatal hepatitis, intrahepatic biliary atresia or hypoplasia, and extrahepatic biliary atresia. Kinetics of ^{131} 1-Rose Bengal plasma clearance, biological half-life, urinary and fecal excretion, and hepatic uptake are determined by direct counting and nuclear scanning techniques.
Findings: Biliary excretory deficiency can be total in both extrahepatic and intrahepatic disorders. However, intrahepatic conditions are characterized by intermittent excretion of biliary components; whereas, extrahepatic obstructive disease patterns are linear.
Duration: June 1971-continuing.
Cooperating group(s): National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.
Publications: (1) Thaler, M.M. Biliary excretory function and excretory patterns in infantile cryptogenic cholestasis. In C.A. Goresky and M.M. Fisher (Eds.), ***Jaundice.*** New York: Plenum Publishing Corporation, 1975. Pp. 313-324. (2) Thaler, M.M. Effect of phenobarbital on hepatic transport and excretion of ^{131} 1-Rose Bengal in children with cholestasis. ***Pediatric Research,*** 1972, 100-110.

41-GF-2 NEW AMINO ACID DISORDERS IN CEREBRAL DISEASE

Investigator(s): Vivian E. Shin, M.D., Associate Professor; and Harvey L. Levy, M.D., Associate Professor, Department of Neurology, Harvard Medical School, Massachusetts General Hospital, Fruit Street, Boston, Massachusetts 02114.
Purpose: To study the biochemical defects of newly discovered hereditary metabolic disorders and to develop effective treatment for affected patients.

Subjects: Approximately 40 patients, mostly children, with various rare inborn errors of metabolism.

Methods: Special dietary treatment and megavitamin therapy for the various forms of metabolic disorders have been designed and given to the patients. The progress of these patients is monitored by measuring their growth and development and by measuring biochemical changes in blood and urine. Cultured fibroblasts are used for investigation of enzyme defects.

Findings: New variants of galactosemia have been discovered. Dietary and vitamin treatment have been found to be effective in the management of MSUD, MMA, and galactosemia. A β -mercaptopyruvate sulfur transferase deficiency has been detected in β-mercaptocysteine lactate disulfiduria. An ornithine keto acid transaminase deficiency has been confirmed in patients with gyrate atrophy of the choroid and retina.

Duration: 1962-continuing.

Cooperating group(s): National Institute of Neurological and Communicative Disorders and Stroke; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

Publications: (1) Levy, H.L. ***et al.*** Sepsis due to escherichia coli in neonates with galactosemia. ***New England Journal of Medicine,*** 1977, 297, 823-825. (2) Shih, V.E. ***et al.*** Sulfite oxidase deficiency. ***New England Journal of Medicine,*** 1977, 297, 1022-1028.

41-GF-3 CLINICAL TRIALS IN THE TREATMENT OF CHILDHOOD NEOPLASMS

Investigator(s): Barbara Jones, M.D., Professor, Department of Pediatrics, West Virginia University School of Medicine, Morgantown, West Virginia 26506.

Purpose: To determine the best multidisciplinary parapeudic approach to children with various types of neoplasms.

Subjects: Children with cancer, ages 0 to 15.

Methods: The investigator participates in one of the clinical cancer cooperative groups which involves 26 different institutions and has a statistical office for handling the data (see Study 41-AA-22 in this issue).

Findings: There is significant improvement in survival and cure rates of several types of childhood cancer.

Duration: 1961-continuing.

Publications: (1) Jones, B. Prophylactic CNS therapy of leukemia. Chapter in ***Modern problems in pediatrics,*** 1975, 16:99-1 12, Karger-Basel. (2) Jones, B. ***et al.*** Chemotherapy of reticuloendotheliosis. Comparison of methotrexate plus prednisone vs. vincristine plus prednisone. ***Cancer,*** 1974, 34, 1011-1017. (3) Jones, B. Reticuloendotheliosis. In C. Pochedly and T.F. Necheles (Eds.), ***Major problems in childhood cancer.*** Springfield, Illinois: Charles C Thomas, 1973. Pp. 278-310.

41-GG-1 PICA COBALT THERAPY

Investigator(s): Gene Grabau, M.D., Clinical Assistant Professor; and Donald L. Thurstons, M.D., Professor, Department of Pediatrics, Washington University School of Medicine, St. Louis Children's Hospital, 500 South Kingshighway, St. Louis, Missouri 63110.

Purpose: To study clinically the use of cobalt in the treatment of pica.

Subjects: Approximately 50 children: infants to adolescents.

Methods: This is a double blind study in which cobalt and a placebo are used in alternating administrations. A 2- to 3-week cessation of pica is the criterion of successful treatment.

Findings: There have been no failures in toddlers and young children who have unlimited diets.

Duration: 1976-continuing.

41-GG-2 BILE PIGMENTS IN THE PERINATAL PERIOD

Investigator(s): Boris H. Reubner, M.D., Professor, Department of Pathology, School of Medicine, University of California, Davis, California 95616.
Purpose: To clarify the etiology of neonatal hyperbilirubinemia.
Subjects: Newborn infants.
Methods: Bilirubin pigments in meconium and bile are being identified by thin layer chromatography.
Findings: There are significant changes in the chemical nature of bile pigments during fetal maturation.
Duration: 1972-continuing.
Publications: Reubner, B.H. Pigments in humans and nonhuman primates. ***Pediatric Research,*** 1976, 10, 664-668.

41-GG-3 HUMAN GENETIC PROGRAM

Investigator(s): Robin M. Bannerman, M.D., Professor of Medicine and Pediatrics; and Head, Joint Divisions of Medical/Human Genetics; and M. Rattazzi, M.D.; R. Neu, Ph.D.; and N. Dennis, M.D., Division of Human Genetics, Children's Hospital; and Robert Guthrie, M.D., Bell Facility, State University of New York, Buffalo, New York 14222.
Purpose: To provide teaching, research, and service in the field of medical genetics.
Subjects: Children with childhood biomedical disorders, chromosomal disorders, neural tube defects, congenital heart disease, etc.
Methods: This wide-ranging program includes the work of several laboratories, genetic clinics, and many investigators.
Duration: 1966-continuing.
Publications: Information is available from the investigators.

41-GG-4 TRANSIENT NEONATAL TYROSINEMIA

Investigator(s): Peter Mamunes, M.D., Professor of Pediatrics and Human Genetics, Medical College of Virginia, P.O. Box 187, Richmond, Virginia 23298.
Purpose: To evaluate the incidence, pathogenesis, and outcome of neonates who suffer from transient neonatal tyrosinemia.
Subjects: 30 boys and girls, ages 5 to 8, each of whom was discovered as having suffered from severe tyrosinemia in the first 2 months of life.
Methods: The investigator has reported previously on the finding of significant intellectual impairments in 15 children, age 5, who, as neonates, suffered from severe neonatal tyrosinemia. These children were inadvertently discovered with this disorder by virtue of their need for a Guthrie test after their discharge from the neonatal nursery or birth at home. At approximately age 5 they received three separate psycholinguistic evaluations: the McCarthy Scale of Children's Abilities, the Illinois Test of Psycholinguistic Abilities, and the Peabody Picture Vocabulary Test. They scored significantly lower values than a control group. Another 15 such children will be evaluated who have been uncovered since the original 15 were studied.
Duration: Summer 1974-Summer 1979.
Publications: Intellectual deficits after transient tyrosinemia. ***Pediatrics,*** 1976, 57, 675-680.

41-GG-5 PEDIATRIC CLINICAL PHARMACOLOGY

Investigator(s): Sumner J. Yaffe, M.D., Professor, Department of Pediatrics, University of Pennsylvania; and Division of Clinical Pharmacology, Joseph Stokes, Jr. Research Institute, Children's Hospital of Philadelphia, 34th and Civic Center Boulevard, Philadelphia, Pennsylvania 19104.
Purpose: To establish a multidisciplinary program in Pediatric Clinical Pharmacology within the Joseph Stokes, Jr. Research Institute to provide information on drug disposition and action.
Subjects: Infants and children in need of drug therapy.
Methods: The major thrust of the program is the investigation of drug disposition and action in sick infants and children. Complementary programs are being developed to study drug surveillance and the sociobehavioral determinants of compliance.
Findings: Drug disposition and action in several groups of children have been studied. A marked inter- and intrapatient variation has been found in theophylline disposition. Gentamicin administered by aerosol to children with cystic fibrosis appears safe and efficacious.
Duration: 1975-1982.
Cooperating group(s): Hershey Medical Center, Department of Pharmacology.

Mentally Retarded

41-HB-1 CYTOGENETICS OF MENTAL RETARDATION

Investigator(s): Patricia A. Jacobs, D.Sc., Professor, Department of Anatomy and Reproductive Biology, John A. Burns School of Medicine, University of Hawaii, 1960 East-West Road, Honolulu, Hawaii 96822.
Purpose: To determine the frequency of chromosome abnormalities in a population of unselected mental retardates; and to investigate (1) the contribution of chromosome abnormalities detectable, using banding techniques, to the etiology of mental retardation; and (2) the incidence of heteromorphisms in the various racial groups in Hawaii.
Subjects: To date: 700 moderately to profoundly mentally retarded Hawaiian subjects, ages 0 to 29.
Methods: Patients from the state institution for the mentally retarded and private educational facilities are surveyed. After a small blood sample is obtained, the chromosomes are examined on the microscope using modern banding techniques. Results agreed upon by at least two observers are recorded. All cytogenetic results and patient data are entered on the computer for statistical analysis.
Findings: Of the 700 children examined, detectable chromosome abnormalities have been found to be the reason for retardation in 12%.
Duration: March 1974-June 1979.
Cooperating group(s): (1) Spencer Foundation. (2) National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.
Publications: (1) Mayer, M. ***et al.*** Inversions and other unusual heteromorphisms detected by C-banding. ***Human Genetics*** (in press). (2) Matsuura, J. ***et al.*** A cytogenetic survey of an institution for the mentally retarded: II. C-band chromosome heteromorphisms. ***Human Genetics*** (in press). (3) Jacobs, P.A. ***et al.*** Structural chromosome abnormalities in Down's syndrome: A study of two families. ***Cytogenetic Cell Genetics*** (in press). (4) Jacobs, P.A. ***et al.*** A cytogenetic survey of an institution for the mentally retarded: I. Chromosome abnormalities. ***Clinical Genetics,*** 1978, 13, 37-60.

41-HC-1 VESTIBULAR STIMULATION EFFECTS ON LANGUAGE ABILITY OF MENTALLY RETARDED CHILDREN

Investigator(s): Robert M. Kantner, M.S., Assistant Professor, Division of Physical Therapy, Medical College of Georgia, Augusta, Georgia 30901; David L. Clark, Ph.D., Associate Professor, Department of Anatomy, Medical School, Ohio State University, Columbus, Ohio 43210; and Beth A. Kantner, M.S., Speech Pathologist, Milton C. Porter Education Center, Adrian, Michigan 49221.

Purpose: To determine the effectiveness of vestibular stimulation (semicircular canal) in improving language ability in mentally retarded children.

Subjects: 30 mentally retarded girls and boys, ages 5 to 14, with a mean IQ of 44.

Methods: Children were pre- and posttested on the Porch Index of Communicative Ability in Children (PICAC). Overall scores were rank ordered, and children were assigned to one of three treatment groups: vestibular and speech therapy, speech therapy, or general language stimulation. Treatment was carried out over a 6-week period. The vestibular group received specific semicircular canal stimulation twice a week in addition to specific speech therapy. Analysis of covariance and t-tests were applied to the data.

Findings: All three groups showed significant within group gains in general communication skills; however, the vestibular treatment group was the only group showing significant within group gains on the verbal language skill area as tested by the PICAC. In addition, the vestibular group showed higher percentage gains in all areas except visual and gestural on the PICAC.

Duration: August 1977-May 1978.

41-HC-2 THE DEVELOPMENT OF SPECIFIC ASPECTS OF VISUAL PERCEPTION IN CLINICAL VS. CONTROL GROUPS OF CHILDREN, AGES 3 TO 11

Investigator(s): K.N. McRae, M.D., Director; and Anne E. Bell, M.A. Research Psychologist, Child Development Clinic, Health Sciences Centre, Children's Hospital, 685 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E OW1.

Purpose: To study the development of children's visual ability (1) to discriminate between figure and ground when the figure is incomplete and the background distracting, and (2) to organize a whole from its parts without the advantage of overt trial and error in producing a meaningful whole.

Subjects: Clinic group: 769 girls and boys, ages 3 to 11, who were referred to the Child Development Clinic for pediatric and/or psychiatric assessment (including psychological examination) over a period of 2 to 3 years. Referrals were made by general practitioners, parents, agencies, and schools. The ratio of boys to girls was 2:1. Control group: 774 girls and boys, ages 3 to 11, selected randomly from school populations (nursery school to grade 6). The control group children were divided evenly by sex, had been known to the investigators from previous research, and had not received clinical treatment. In both groups, seven age groups were examined: combined 3 and 4 years, 5, 6, 7, 8, and 9 years, and combined 10 and 11 years. Complex visual tasks present difficulties for children and adults with brain damage; for young children; for schizophrenics; and for passive, aggressive, and dependent children. Faulty visual perception has been related to reading problems in school children when their IQ is normal. The clinic group included children exhibiting symptoms of all these pathologies as well as other problems (e.g., metabolic disorders and mental retardation of no known etiology).

Methods: It was hypothesized that developmental trends in visual tasks would differ considerably both qualitatively and quantitatively when a clinic population was compared with a normal control group. Closure Test, Hooper Visual Organization Test, and IQ scores were collected from the clinic patients when they were referred for complete assessment (pediatric, speech, hearing, or psychiatric). The control scores were obtained similarly from children in low, middle class, and high socioeconomic areas, since they were included in a longitudinal research project with un-

selected school samples. Data have been collected for 2 to 3 years. The Closure Test (Bell, 1964, unpublished) was constructed when school age patients of the Child Development Clinic were said to be suffering from "perceptual handicaps." (At that time, the handicaps were assumed to be causal factors underlying poor reading abilities, and diagnoses were made based on a child's apparent instability in fine motor and/or in gross motor coordination. There was little recognition that visual perception and motor coordination were relatively independent systems. A test that involved copying required that the child be old enough to control a pencil.) The Closure Test, administered individually with no time limit, consists of 10 cards of incomplete, black figures against a distracting, black and white background. The names of the objects are within the experiences and vocabulary of most 3-year olds. The Hooper Visual Organization Test (Hooper, 1957) measures the ability to recognize line drawings of 30 objects when pictures of increasing complexity have been cut up and placed in different positions. No distracting background is involved. The test was designed for age 14 and over and is used to diagnose organic brain pathology in adults. In this study, the test was used as a measure of an aspect of visual perception where no motor involvement was introduced (e.g., in visual tests requiring drawings to be made). An age trend was expected and also some relationship to reading scores predicted for school children. The task involved the formation of a gestalt from the scattered pieces of a well-known object without the explicit trial and error processes that they employ (e.g., in Object Assembly of the Wechsler Intelligence Scale for Children).

Findings: The groups differed significantly at each age level on Closure, Visual Organization, and IQ. Control scoring on the visual tests at 84 to 95 months was equal to that of the clinic patients at 108 to 119 months. Discriminant analyses showed that the visual closure test best identified the clinic patients among the entire group of 3- and 4-year olds (N = 179), while the IQ level assumed greater importance as a discriminator at subsequent age levels. In line with Thurstone's (1944) findings that closure and visual organization were discrete aspects of visual perception, comparisons of the present closure with visual organization scores show that a number of children (especially those of very low IQ and/or seriously disturbed) responded differentially to these two aspects of visual perception. It was evidently more difficult for them to see the incomplete stimulus of the closure cards as a meaningful configuration and ***hold*** the gestalt against a distracting background than to organize covertly the scattered pieces of the same well-known objects.

Duration: 1974-1978.

Cooperating group(s): (1) Children's Hospital of Winnipeg Research Foundation, Inc. (2) Manitoba Medical Services Foundation, Inc.

Publications: Information is available from the investigators.

41-HD-1 THE NATURE OF MENTAL RETARDATION AND CONGENITAL BLINDNESS

Investigator(s): Sally Rogow, Ed.D., Associate Professor, Department of Special Education, University of British Columbia, Scarfe Annex #1, Vancouver, British Columbia, Canada V6Y 2P2.

Purpose: To investigate the relationship between congenital blindness and the nature of mental retardation among blind children living in mental retardation facilities.

Subjects: Congenitally blind children, ages 0 to 14, who function as severely to moderately retarded.

Methods: Case histories were collected for individual children and the effects of environmental enrichment were observed. Profiles were made of the relationships between language and social development, early experiences, and family contact. Life on wards was observed, especially the effects of different types of educational interventions. Incidence studies were conducted.

Findings: A surprising proportion of totally blind children, diagnosed as severely retarded, are capable of making great gains in development. Blindness masks true capacities.

Duration: September 1977-June 1979.

41-HE-1 **EFFECTS OF WORD FREQUENCY AND CONTEXTUAL RICHNESS UPON WORD RECOGNITION OF EDUCABLE MENTALLY RETARDED (EMR) SUBJECTS**

Investigator(s): Richard L. Allington, Ph.D., Assistant Professor, Department of Reading and Center for Reading and Language Studies, State University of New York, 1400 Washington Avenue, Albany, New York 12222.
Purpose: To further examine utilization of context by EMR subjects.
Subjects: 35 EMR classified elementary school children, ages 7.8 to 11.6.
Methods: Materials from Pearson and Studt (1973) were employed. Subjects were presented with three levels of contextually rich sentences and two levels of word frequency in a modified sentence cloze task.
Findings: Unlike normal subjects, EMR subjects seemed not to benefit from contextually rich sentence frames for the identification of low frequency words.
Duration: April 1977-June 1978.
Cooperating group(s): State University of New York Research Foundation.

41-HH-1 **ASSESSING AND TEACHING COPING BEHAVIOR IN HANDICAPPED PRESCHOOL CHILDREN**

Investigator(s): Shirley Zeitlin, Ed.D., Coordinator, PIE Validation Project, 191 Walnut Street, Northvale, New Jersey 07647.
Purpose: To assess coping behavior in handicapped preschool children; and to develop strategies to teach them.
Subjects: Nine boys and two girls, ages 3 to 5, who are moderately handicapped (neurologically impaired, language impaired, retarded, and emotionally disturbed) and are from middle income, suburban backgrounds.
Methods: This research is part of a 2-year validation study of a preschool handicapped program based on an interaction model for personalized learning. The program is based on the integration of coping behavior and educational skills. The primary goal of the program is to have each child enter the mainstream of education with increased competency in educational skills and coping behavior. Goals for the child are (1) from the point of entry competency, to increase the child's ability to cope with self; (2) to increase the child's ability to cope with the environment; and (3) to increase the child's educational skills in language, perceptual and motor skills, socialization, self-help, and school readiness. Goals for the parents include increasing the parents' ability to cope with the child (1) by increasing their understanding of the child's special needs, (2) by increasing their ability to cope with their own and family needs as a result of the impact of having a special child, and (3) by acquiring skills to help increase the child's competence. Goals for the school include involvement with PIE in which (1) child study teams will place the child in the least restrictive environment, and (2) school personnel will acquire additional knowledge and skills to plan most effectively for the child entering school from the PIE Program. Criteria for validation: The ultimate criteria for the success of the program are the benefits to the child. The goal of PIE is to help children cope more effectively as demonstrated through pre- and posttesting and parent data. Effective coping is operationally defined as an (1) increase in quantity and quality of language; (2) acquisition of school readiness skills; (3) increase in perceptual, motor, and perceptual-motor skills; and (4) increase in self-help and socialization skills. The Coping Questionnaire (Zeitlin, 1978) is used to develop a profile that describes the behaviors and skills that a child uses to cope with himself and his environment. The analysis of a child's coping ability provides information about his resources, vulnerabilities, and general coping style. It is based on the work of Lois Murphy and colleagues at Menninger Clinic. Teaching and learning strategies are developed from the child's profile.
Findings: First year pre- and postdata have been collected and are in the process of analysis.
Duration: June 1977-June 1979.
Cooperating group(s): Title IV C, Elementary and Secondary Education Act.

41-HH-2 EDUCATIONAL PROCESSES OF SEVERELY AND PROFOUNDLY MULTIHANDICAPPED CHILDREN

Investigator(s): Thais R. Beter, Ed.D.; and Wesley Cragin, Ph.D., Perceptual-Motor Specialists, Northwest Louisiana State School, Bossier City, Louisiana 71111.
Purpose: To apply Piaget's theories to the educational processes of severely/profoundly multihandicapped children.
Subjects: 50 girls and boys, ages 6 months to 8 years, who are severely/profoundly multihandicapped.
Methods: For a period of 3 years, the investigators have utilized Piaget's Scale of Sensorimotor Development, the Uzgiris-Hunt Ordinal Scales of Psychological Development, and a motor scale developed for the project. These scales assess the severely/profoundly multihandicapped children's abilities as well as provide purposeful and sequential educational experiences. Utilization of the scales is significant because (1) they evoke easily observed actions that imply selective cognitive structures, (2) changes in behavior through given experiences can imply changes in structures, and (3) these changes in reaction can be checked by means of systematic variations in the ensuing environmental situations.
Duration: 1974-continuing.

41-HH-3 PROGRAMMED ENVIRONMENTS FOR THE DEVELOPMENTALLY RETARDED

Investigator(s): James W. Tawney, Ph.D., Associate Professor, Programmed Environments Project, University of Kentucky, 114 Porter Building, 730 South Limestone, Lexington, Kentucky 40506.
Purpose: To develop (1) an automated curriculum and test it at the Programmed Environments Model Preschool, (2) a teacher controlled curriculum for preschool children assumed to be severely retarded/multiply handicapped, (3) competency based instructional modules for teachers, and (4) a system that collects data on teacher and child performance; and to initiate off-site validation or evaluation of the curriculum, competency based training manuals, and the data system.
Subjects: Girls and boys, ages 3 to 12, with assumed severe developmental retardation and/or multiply handicapping conditions; and their teachers. The children's behaviors include little or no vocal behavior; limited motor/gestural behavior; limited self-help skills; inconsistent or no bowel or bladder control; no obtained score on a standard IQ test (because the children are considered nontestable); limited social interaction with other children and adults; inability to follow simple commands; no reciprocal social reinforcement of others; high rates of stereotyped and disruptive social behavior; and a low rate of constructive play behavior.
Methods: Based on the first 3 years of operation of a model preschool, a curriculum for the children and a teacher training manual have been developed consisting of competency based modules of instruction to train/retrain staff for preschool environments for the developmentally retarded. The curriculum and manual are being validated in classes at the Programmed Environments Preschool and in classes in Boston, Massachusetts; Albuquerque, New Mexico; and Louisville, Kentucky. The instructional programs are being used by teachers or others who have demonstrated content and performance competency on the training manual, which consists of four instructional modules: how to select instructional programs, how to present programs and take data, how to correct errors and modify programs, and how to manage student behavior. The programs, designed to be used in classrooms in a one-to-one situation or in small groups, will consist of small sequential steps with specific teaching strategies for each step through which the child progresses in order to acquire a particular skill. Other programs will consist of a task analysis with suggested teaching strategies for each part of the task analysis. The skills areas included in the curriculum are: social skills; receptive and expressive language skills; concept learning; number concepts; fine and gross motor skills; and eating, dressing, and grooming skills.
Duration: June 1972-May 1979.

Cooperating group(s): Division of Innovation and Development; Research Projects Branch; Bureau of Education for the Handicapped; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare.
Publications: A curriculum consisting of approximately 90 programs for children, training modules for teachers, and a supplementary videotape will be made available through commercial publication.

41-HJ-1 **A 5-YEAR EVALUATION OF FISSURE SEALING OF THE TEETH OF MENTALLY RETARDED CHILDREN**

Investigator(s): B.A. Richardson, D.D.S., Pedodontist, Associate in Dentistry; D.C. Smith, M.Sc., Ph.D., Professor of Biomaterials, School of Dentistry, University of Toronto, 22 Water Street South #11, Kitchener, Ontario, Canada N2G 4K4.
Purpose: To evaluate fissure sealing as a preventive dental technique with special emphasis on the problems of mentally retarded children.
Subjects: 160 mentally retarded children (64% male, 36% female), ages 5 to 21, IQs 30 to 80, selected from residents of the Midwestern Regional Children's Centre, Palmerston, Ontario.
Methods: The study consists of clinical dental examinations at 3-month intervals of the children who participated in the initial study. Recordings of the incidence of decayed, missing, and filled teeth are made for both the teeth treated with sealant and the untreated control teeth. The examination is made independently by two assessors who were involved in the initial trial. The statistical methodology developed by Cvar (test of significance, percent effectiveness, and net gain) will be used to evaluate the results and to ascertain if there is a long-term benefit from a single application of a resin fissure sealant to the teeth of these children.
Findings: At the end of the 1st year, 136 children were examined and a total of 665 teeth were evaluated: 72.2% of these teeth remained sealed and 2.2% were extracted or exfoliated. At the end of the 2nd year, 144 children were examined and a total of 686 teeth were evaluated: 59.5% of these teeth remained sealed and 19.2% partially sealed; 18.1% were not sealed, 3.2% were extracted or exfoliated. The percent effectiveness had decreased from 78.8% the 1st year to 67.9% the 2nd year. The results of both years were highly significant. Although the percent effectiveness had decreased nearly 11 percentage points, from the 1st to the 2nd year, the sealant still is significantly effective. It seems desirable, on preventive and sociological grounds, that mentally retarded children should have their teeth treated by such sealant procedures.
Duration: January 1972-December 1978.
Cooperating group(s): (1) Ontario Health Research Grant. (2) Hospital for Sick Children Grant. (3) Midwestern Regional Children's Centre, Palmerston, Ontario, Canada.
Publications: (1) Richardson, B.A. ***et al.*** Study of a fissure sealant in mentally retarded Canadian children. ***Community Dentistry Oral Epidemiology,*** 1977, 5, 220-226. (2) Richardson, B.A. Clinical evaluation to measure the effectiveness of polymer fissure sealant as a caries preventive agent for handicapped children. Thesis, University of Toronto, 1975. (3) Richardson, B.A. ***et al. Journal of Dental Research,*** 1974, 53(252), Abst. 791.

41-HJ-2 **SELF-INJURIOUS BEHAVIOR: SENSORY AWARENESS TRAINING AS GROUP TREATMENT AND AN ETIOLOGICAL ANALYSIS**

Investigator(s): Donald Pierson, M.Ed., Head Psychologist, Gouverneur Unit, Manhattan Developmental Center, 621 Water Street, New York, New York 10002; Erwin Friedman, Ph.D., Director, Manhattan Developmental Center, New York State Department of Mental Hygiene, 75 Morton Street, New York, New York 10014; and Aaron Wolfgang, Ph.D., Associate Professor, University of Toronto, Ontario Institute for Studies in Education, Department of Applied Psychology, 252 Bloor Street West, Toronto, Ontario, Canada M5S 1V6.

Purpose: To demonstrate an alternative treatment program for self-injurious behavior in institutionalized retardates; and to consider the etiological assumptions relevant to the development and maintenance of this behavior.

Subjects: 18 profoundly and severely retarded, multiply handicapped, nonambulatory, institutionalized male and female residents suffering from permanent, irreversible physical injury as a result of head banging, eye gouging, sucking, biting, scratching, and punching various parts of their bodies. Mental ages were below 6 months on the Bayley Scales of Infant Development. Chronological ages ranged from 16 to 26. The average length of institutionalization was 17 years. All subjects had to be restrained by mechanical devices for a significant part of the day. Children with multiple handicaps were included in the sample.

Methods: The goal of the sensory stimulation program is to increase the level of sensory awareness (and therefore sensory integration and discriminative ability) through basic stimulation of the senses of tactility, kinesthesia, olfaction, audition, and vision. A subject's level of sensory awareness is defined as his ability to react in an adaptive fashion to pleasant and unpleasant stimuli, his ability to integrate memory of past events with present stimulation, and his awareness of people and common objects as well as his comprehension of rudimentary communication symbols. Repeated presentation of discrete sensory stimuli has been shown to greatly facilitate the development of single sensory reactions. It was expected that self-injurious behavior would decrease as level of awareness increased. To test the effects of awareness training vs. traditional institutional treatment, two groups of nine residents were compared on pre- and posttreatment dependent measures. Dependent measures were rate of self-injurious behavior per 10 minutes of observation and recording per resident with digital counters and stopwatches (10 daily 10-minute periods for 3 days). Sensory awareness was measured with the Awareness Scale (Form A) of the Glenwood Awareness, Manipulation and Posture Scale. The scale yields a numerical score ranging from 0 to 39, with higher scores indicating a higher level of awareness. Residents were then assigned to one of the two treatment conditions. In the experimental condition, residents received two sessions per day, 4 days a week for 8 weeks. In the control condition, residents received an equal amount of traditional institutional treatment (physical therapy, recreation therapy, speech therapy, etc.). Following the treatment phase, residents were observed to determine the rate of self-injurious behavior and were administered the Awareness Scale (Form B). Baseline observation procedures were repeated 6 weeks later. Statistical analysis consisted of analysis of covariance on dependent measures. Posttreatment and follow-up rates of self-injurious behavior and sensory awareness scores served as criteria variables with the corresponding pretreatment measures employed as covariates. Group means were used as the unit of analysis. Interrater reliability was measured by the percent of agreement during observation periods in which two researchers were present.

Findings: The pretreatment baseline observation phase yielded a mean self-injurious behavior rate of 51.92 per 10-minute period for the experimental group and 43.66 per 10-minute period for the control group. The Sensory Awareness Scale yielded mean scores of 12.88 for the experimentals and 13.33 for the controls. Interrater percent agreement was determined to be 96.57 based on 54 observation periods where two observers were present. Subjective verbal and written (behavioral checklist) reports of 42 staff members not directly involved in the program indicate some gains in social functioning (increased vocalizing, smiling, and eye contact) as well as decreased rates of self-injurious behavior for treatment subjects. The behavioral checklist was filled out after 5 weeks of treatment.

Duration: December 1977-completed.

Publications: Information on the project and related publications are available from Mr. Pierson.

Gifted

41-IA-1 CHANCE OR REAL TALENT? USING THE MECHANICAL REASONING TEST TO IDENTIFY TALENTED 4TH GRADERS

Investigator(s): Marilyn Johnson, Ph.D., Combined Program in Education and Psychology; and Jean Dirks, Ph.D., Postdoctoral Fellow, Developmental Psychology Department, School of Education Building, University of Michigan, Ann Arbor, Michigan 48109.

Purpose: To establish the validity of the Mechanical Reasoning Test (MRT), an unconventional instrument designed to assess creativity.

Subjects: 164 fourth graders from two public schools in Southeastern Michigan.

Methods: This study was a test analysis that included calculations of the probabilities of certain scores being obtained by chance, test reliability, item difficulty, item discrimination, factor analysis, and validity. Traditional correlational methods will be used to validate the MRT, although under the model of multiple traits defining talent, a low correlation between the MRT and other measures will not invalidate it as a predictor of talent. Another method of determining validity was used in which children were presented individually with concrete examples from the test and asked to explain the principle behind the action. The instrument could be considered a valid measure of special talent to the extent that children who did better on the test were also able to give more adequate explanations than children who did less well.

Findings: The MRT is a sex biased instrument even as early as fourth grade. (There are separate norms for males and females at the high school level.) The correlation between the California Achievement Test and the MRT is higher for males than for females.

Duration: January 1978-December 1978.

Publications: (1) A paper presented at the meeting of the American Psychological Association, Toronto, Ontario, Canada, August 1978. (2) Information is available from the investigators.

41-IA-2 THE EFFECTS OF COEDUCATION ON GIFTED ADOLESCENT FEMALES

Investigator(s): Judith G. Dederick, Ph.D., Associate Professor; and Sue Rosenberg Zalk, Ph.D., Associate Professor, School of Education, Hunter College, City University of New York, Box 615, 695 Park Avenue, New York, New York 10021; and Warren E. Dederick, Ed.D., Professor, School of Education, Brooklyn College, City University of New York, Brooklyn, New York 11210.

Purpose: To study the effects of introducing coeducation to Hunter College High School, a laboratory school for highly gifted adolescents which was all girls until 1974-1975.

Subjects: 200 students per grade (7 through 12) of Hunter College High School each academic year beginning with 1974-1975. The subjects are ages 12 to 18, are ethnically and socioeconomically mixed, and have an average IQ of 130. Currently, there are all girls in grades 10 through 12; and half girls, half boys in grades 7 through 9.

Methods: Data are being collected longitudinally, with each group serving as its own control, for investigation of time effects. Comparisons are being made between coed and all-girls' groups, as coed groups reach the same age levels as previously tested all girls' groups. Paper-and-pencil tests include Mooney Problem Check List and Gordon Survey of Interpersonal Values. Classroom observations were done in grade 7 coed, and a series of videotapes was made of group processes among single-sex and coed groups. The data are being analyzed along with new data on social popularity.

Findings: Survey of Interpersonal Values: Some sex differences appear, but sex-group scores are not affected by coed or all-girls' grouping. Further analyses are underway. Classroom observations: Neither sex performed differently from the other in: volunteering, talking (length of time), or choosing to answer higher- or lower-level questions.

Duration: Spring 1975-Spring 1982.
Cooperating group(s): (1) Hunter College, George N. Shuster Faculty Fellowship Fund. (2) Hunter College High School, Parents' Association. (3) Hunter College High School, Campus Schools.
Publications: A paper presented at the Annual Convention, American Educational Research Association, New York, March 1977: Dederick, Dederick and Zalk. Interpersonal values of intellectually gifted adolescent females.

41-IA-3 COMMUNITY-BASED CAREER EDUCATION FOR GIFTED AND TALENTED STUDENTS

Investigator(s): Sharon Colson, M.Ed., Research Associate; Christopher Borman, Ed.D., Professor and Director; and William Nash, Ed.D., Associate Professor, Center for Career Development and Occupational Preparation, College of Education, Texas A & M University, College Station, Texas 77843.
Purpose: To examine the effectiveness of a community-based career education program for gifted and talented students as an alternative approach to serving the unique career development needs of this special population.
Subjects: 60 high school seniors who meet criteria for gifted and/or talented.
Methods: Three high school campuses were involved: (1) 20 students from A & M Consolidated High School, College Station, Texas: repeated measures design group; (2) 20 students from Ray High School, Corpus Christi, Texas: experimental group; and (3) 20 students from Carroll High School, Corpus Christi, Texas: control group. The program is conducted in three phases: Guidance Laboratory phase, Mentorship Laboratory phase, and Internship phase.
Duration: July 1977-June 1978.
Cooperating group(s): (1) Office of Career Education; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare. (2) A & M Consolidated Independent School District, College Station, Texas. (3) Corpus Christi Independent School District, Corpus Christi, Texas. (4) Del Mar Community College, Corpus Christi, Texas. (5) Business Sectors in College Station, Bryan, and Corpus Christi, Texas.
Publications: (1) Final Report, October 1978. (2) Implementation Handbook, October 1978.

Emotionally Disturbed and Mentally Ill

41-JA-1 OUTCOME OF ADOLESCENT PSYCHIATRIC DISORDERS: A LONG-TERM FOLLOW-UP STUDY

Investigator(s): Wentworth Quast, Ph.D., Professor, Division of Health Care Psychology, University of Minnesota Medical Center, Minneapolis, Minnesota 55455.
Purpose: To learn the outcome for various problems in adolescence and to construct simple predictive combinations of characteristics that professionals can use to predict which adolescents will continue to have problems.
Subjects: 1,108 former psychiatric and pediatric patients, ages 13 through 17, seen at the University of Minnesota Hospitals 25 years ago. The study group includes a consecutive group of 866 adolescent patients seen in Child Psychiatry between 1938 and 1950; and 242 pediatric patients matched individually for age and date seen with a random subset of the psychiatric group. The subjects were representative of the State of Minnesota at that time on various demographic variables.

Methods: Hospital records, telephone directories, and public and agency records were used to locate the subjects. Of the 1,108 subjects, 89.9% were positively located and 951 were interviewed; 58 subjects refused to participate in the study; and 109 were dead at the time of follow-up. The subjects (average age at follow-up, 39) were interviewed in Minnesota (73%) and around the country (27%) by a group of trained interviewers using a structured questionnaire. An interview with a relative was utilized in the 88 cases of dead or incapacitated subjects. Questionnaires were mailed to subjects or relatives who could not be interviewed personally. The subjects were asked to complete the Minnesota Multiphasic Personality Inventory (MMPI). The total project data involved 1,000 pieces of information, including the original University Hospital records containing histories, presenting complaints, psychological testing and treatment notes, school and welfare records, later records of psychiatric treatment, military experience, law violations, and vocational training as well as the follow-up interview and MMPI. An analysis revealed that few biases were introduced by differential attrition of subjects. Five-point mental health ratings (MHR) of overall adjustment were done for the adolescent period and for the 5-year period preceding follow-up using the above data.

Findings: Results of the initial follow-up data analysis are: The majority of adolescent psychiatric patients did not continue to have serious problems as adults. By follow-up, there was approximately a 50% drop in the number of males and females rated as having moderately or severely incapacitating problems, and an approximate drop of 80% in number of those with law violations. However, former patients did continue to have problems in adulthood in rates exceeding those found for the nonpsychiatric sample. The psychiatric group had lower social class and mental health ratings, higher incidence of inpatient psychiatric treatment, and more of them had never married. There were no differences between psychiatric and comparison groups in the incidence of outpatient psychiatric treatment or overt antisocial behavior (law violations, drunkenness) in adulthood. Women had higher rates of outpatient treatment than men, while men had higher rates of antisocial problems. General, nonsymptom specific measures of adolescent adjustment (i.e., mental health ratings and a count of the number of symptoms) were found to be related to a wider variety of adult outcomes than other measures. These general severity or extent of pathology indices were related to degree of general incapacitation in adulthood (adult MHR) in both males and females. General severity of disturbance in adolescence was also related to incidence of law violations among males but not females. Antisocial behavior at adolescence (antisocial personality diagnosis; number of law violations) was correlated with antisocial behavior at outcome (incidence of law violations; self-reported number of times drunk in the last year) in both sexes. It appears that adolescent antisocial behavior had more pervasive implications for females than for males. Diagnoses among males were not generally related to their adult outcomes; however, certain diagnoses among females were. Adolescent diagnosis of psychosis was correlated with lower adult MHR and with never having been married among females. Antisocial personality was correlated with lower adult MHR and greater incidence of law violations and times drunk in the last year. Among females, neurotic diagnosis was associated with better than average outcomes, including better MHR and less outpatient treatment. Adolescent adjustment reaction was not found to relate significantly to either good or poor adult outcome. Poor adolescent peer relations were associated with general severity of adult disturbance (MHR) in both males and females, and were also related to adult social class and never having married among males and to adult average MMPI elevation in females. Placement in foster home during adolescence correlated with adult severity of disturbance, incidence of inpatient treatment, and average MMPI elevation among females, and to adult social class and incidence of law violations among males.

Duration: Completed.

Publications: Shea, M.J. ***et al.*** Outcome of adolescent psychiatric disorders: A long-term follow-up study. In E. James Anthony and Cyrille Koupernik (Eds.), ***The child and his family: The vulnerable child.*** Yearbook of the International Association for Child Psychiatry and Allied Professions. Volume IV. New York: John Wiley & Sons (in press).

41-JA-2 IDENTIFYING PRESCHOOL CHILDREN AT RISK

Investigator(s): Helen Reinherz, Sc.D., Director of Research and Professor, School of Social Work, Simmons College, 51 Commonwealth Avenue, Boston, Massachusetts 02116.
Purpose: To describe the incidence of social and emotional problems of children entering kindergarten; and to develop a screening battery to make identification possible.
Subjects: Two cohorts of boys and girls, ages 4 to 5, entering kindergarten (832 in 1976, 750 in 1977).
Methods: A screening battery was developed which includes assessments of health, developmental history, and cognitive and sensory functioning. A Behavior Checklist was designed to tap behaviors considered by clinicians as indicators of social and emotional dysfunction for this age group. The battery was piloted with over 800 children in 1976. After revision it was administered to 750 children in 1977. A subsample of 85 children was seen for clinical interviews, and the results were compared to the screening procedure. Follow-up data have been collected for the 1977 sample, which will serve to evaluate the screening procedure.
Findings: A criterion validation study indicates that disturbed and normal children are significantly differentiated ($p < .04$) on the Behavior Checklist. Further analysis will establish the predictive accuracy of the screening procedure as it relates to measures of children's functioning at follow up. Recommendations for screening policy, as well as for providing identified service needs, will be made after the data are analyzed.
Duration: September 1976-August 1978.
Cooperating group(s): National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare.
Publications: Reinherz, H. and Griffin, C.L. Identifying children at risk: A first step to prevention. ***Health Education,*** July-August 1977, 8(4).

41-JB-1 MOTHER-INFANT ATTACHMENT AND SUBSEQUENT CHILDHOOD PSYCHOPATHOLOGY

Investigator(s): Henry N. Massie, M.D., Director, Child and Adolescent Psychiatric Training, McAuley Neuropsychiatric Institute, 450 Stanyan Street, San Francisco, California 94117; and B. Kay Campbell, Ph.D., Co-Principal Investigator, Children's Hospital, 3700 California Street, San Francisco, California 94119.
Purpose: To document patterns of mother-infant reciprocal responsiveness and correlate them with the child's later personality structure and psychopathology if it eventuates.
Subjects: Two groups of mother-infant dyads: aberrantly responding mother-infant dyads and a normal group.
Methods: Data collection starts at birth and continues longitudinally. Films are made of standardized stress situations which are then rated by blind raters using the Attachment Indicators During Stress Scale (AIDS), the principal tool used to document reciprocal interaction. This scale was developed by the principal investigators.
Duration: 1978-1983.
Publications: ***Ties that bind: Studies in mother-infant interaction and childhood psychosis.*** New York: McGraw Hill (Projected publication date, Winter 1979).

41-JC-1 BEHAVIORAL ASSESSMENT OF CHILDHOOD HYPERACTIVITY

Investigator(s): Robert H. Willoughby, Ph.D., Associate Professor, Department of Pediatrics, Children's Rehabilitation Center, University of Virginia, Route 250 West, Charlottesville, Virginia 22901.
Purpose: To design a behaviorally based battery of measures to assess childhood hyperactivity by comparison to nonhyperactive children.

Subjects: 80 male and 80 female nonhyperactive children, ages 4 to 7.
Methods: Subjects were administered an open field activity measure, the Matching Familiar Figures Test, Continuous Performance Test, and Porteus Mazes. Parent ratings were also obtained.
Findings: Normative information indicates that (1) activity inhibition increases with age, (2) vigilance to auditory stimuli improves with age, and (3) impulsivity declines and errors decline with age on the Matching Familiar Figures Test.
Duration: September 1975-September 1980.
Cooperating group(s): University of Virginia Medical Center Research Fund.
Publications: Unpublished manuscripts are available from the investigator.

41-JC-2 A COMPARISON OF BEHAVIOR MODIFICATION AND METHYLPHENIDATE WITH HYPERACTIVE CHILDREN

Investigator(s): Philip Firestone, Ph.D.; and Mary Jo Kelly, Ph.D., Psychologists; and John T. Goodman, Ph.D., Chief Psychologist, Children's Hospital of Eastern Ontario, 401 Smyth Road, Ottawa, Ontario, Canada K1H 8L1.
Purpose: To investigate the relative efficacy of behavior modification and methylphenidate in the treatment of hyperactive children.
Subjects: 30 hyperactive children of normal intelligence.
Methods: Children were assigned randomly to three treatment conditions: (1) parent training groups in which behavior modification was taught and children were given methylphenidate, (2) parent training groups in which the children were given a placebo, and (3) parent training groups in which methylphenidate was withdrawn from the children around the 4th month. Behavioral, educational, and attentional measures were collected before and after treatment and at 6-month follow-ups for 3 years. In addition, demographic and psychological information concerning parents was collected.
Duration: Completed.

41-JC-3 THE EFFECTS OF CAFFEINE AND METHYLPHENIDATE ON HYPERACTIVE CHILDREN

Investigator(s): Philip Firestone, Ph.D., Psychologist; John T. Goodman, Ph.D., Chief Psychologist; Jean Davey, M.D., Pediatrician; and Susan Peters, B.A., Research Assistant, Children's Hospital of Eastern Ontario, 401 Smyth Road, Ottawa, Ontario, Canada K1H 8L1.
Purpose: To further evaluate the effects and possible side effects of 300 mg. and 500 mg. of caffeine per day on hyperactive children; and to compare the effects of high and low dosages of caffeine with those of methylphenidate used in the normally prescribed fashion.
Subjects: 17 boys and 4 girls, ages 6 to 12: hyperactive children of normal intelligence. The onset of hyperactivity had been noticed in all subjects between ages 1½ and 2. All subjects had a hyperactivity factor on Conners' Behavior Rating Scale (1969) of at least 1.5.
Methods: A double blind cross-over design investigation involved three conditions: 500 mg. caffeine, 300 mg. caffeine, and approximately 20 mg. methylphenidate per day. Subjects remained in each condition for 3 weeks. Tests and apparatus used in data collection included the Matching Familiar Figures Test, Porteus Maze Test, Conners Behavioral Rating Scale, Conners Short Form Rating Scale, and Reaction Time Apparatus.
Findings: Methylphenidate resulted in significantly improved behavior. There were no significant improvements in either of the caffeine conditions. The negative side effects with both caffeine and methylphenidate were minimal.
Duration: Completed.
Publications: Information is available from the investigators.

41-JC-4 ANALYSIS OF THE HYPERACTIVE SYNDROME: A COMPARISON OF HYPERACTIVE, BEHAVIOR PROBLEM, ASTHMATIC, AND NORMAL CHILDREN

Investigator(s): Philip Firestone, Ph.D., Psychologist, Children's Hospital of Eastern Ontario, 401 Smyth Road, Ottawa, Ontario, Canada K1H 8L1; and Jaclynn E. Martin, M.A., Carleton University, 281 Echo Drive, Ottawa, Ontario, Canada K1S 1N4.
Purpose: To determine whether the commonly described deficits associated with hyperactivity – inappropriate activity, short attention span, low frustration tolerance, and impulsivity – are unique to the hyperactive population.
Subjects: 50 hyperactive, asthmatic, behavior problem, and normal control children, ages 5 to 12, all of normal intelligence.
Methods: Rating scales, tests, and apparatus used in data collection included Conners Behavioral Rating Scale, Matching Familiar Figures Test, Story Completion Test, Porteus Maze Test, Reaction Time Apparatus, and Stabilimetric Cushion.
Findings: Hyperactive children, when compared to normal children, did show deficits in the areas associated with hyperactivity (see Purpose above). However, when compared to the behavior problem and asthmatic children, only the attentional deficits clearly differentiated the hyperactive children from the other children.
Duration: Completed.

41-JC-5 THE EFFECTS OF CAFFEINE ON HYPERACTIVE CHILDREN

Investigator(s): Philip Firestone, Ph.D., Psychologist, Children's Hospital of Eastern Ontario, 401 Smyth Road, Ottawa, Ontario, Canada K1H 8L1; Hélène Poitras-Wright, B.A.; and Virginia Douglas, Ph.D., McGill University, Montreal, Quebec, Canada.
Purpose: To determine the effects of caffeine on hyperactive children.
Subjects: 21 hyperactive boys, ages 5 to 12, of normal intelligence. Hyperactivity had to be present in all subjects from early childhood. Hyperactivity factor on Conners Behavioral Rating Scale for Teachers had to be 1.5 or greater. None of the children were taking psychotropic medication and all were living at home with at least one parent.
Methods: This double blind study involved a cross-over design and required each subject to be on caffeine and a placebo for a period of 2 weeks. During this time, data were collected using the Matching Familiar Figures Test, Porteus Maze Test, Goodenough-Harris Draw-a-Person Test, Conners Behavioral Rating Scale, Davis Rating Scale, Delayed Reaction Time Apparatus, and a Gross Model 17 polygraph.
Findings: Caffeine did not improve reaction time and psychological test scores significantly. However, impulsivity and general behavior as measured by parent and teacher rating scales showed some significant improvement due to caffeine.
Duration: Completed.
Publications: Information is available from the investigators.

41-JC-6 COGNITIVE BEHAVIOR IN HYPERACTIVE AND IMPULSIVE CHILDREN

Investigator(s): Anne P. Copeland, Ph.D., Assistant Professor, Department of Psychology, Kent State University, Kent, Ohio 44242.
Purpose: To determine differences in cognitive development among hyperactive, impulsive, and reflective children in order to prescribe more appropriate behavioral treatment.
Subjects: 75 boys, ages 6 to 9: 15 learning disabled, hyperactive boys; 15 learning disabled, nonhyperactive boys; 30 normal boys (half impulsive, half reflective); and 15 hyperactive boys.
Methods: The experiment used a modified 2 x 2 design. Factors were learning disabled/not learning disabled and hyperactive/not hyperactive. Data, collected at school, included cognitive and problem solving tasks and measures of private speech.

Findings: Preliminary evidence indicates that hyperactive boys show specific or general cognitive delay as compared to same age, nonhyperactive boys.
Duration: March 1978-December 1978.
Cooperating group(s): Akron, Ohio Public Schools.

41-JC-7 THE NATURAL HISTORY OF HYPERACTIVITY IN CHILDREN

Investigator(s): James L. Chapel, M.D., Professor and Chief of Child Psychiatry, Department of Psychiatry, College of Medicine, University of Missouri, Columbia, Missouri 65212; and Jennifer Bradshaw, M.A., Staff Psychologist, University of Otago, School of Medicine, Dunedin, New Zealand.
Purpose: To study the natural history of the symptoms of hyperactivity and attention span deficit in a group of children who may or may not be treated for these symptoms.
Subjects: 81 girls and boys born in 1973 in Dunedin, New Zealand and selected from a group of 1,037 children. The children were approximately 5 years old when last interviewed.
Methods: From the records of the 1,037 children, a group of children was identified in which the children were described by their parents or by a psychometrist as being "more active than normal." A control group, matched for sex, age, IQ, and socioeconomic status, was selected. All subjects and controls are of at least low normal intelligence and are without serious neurological or sensory deficits. At age 5, each of the control and subject families was visited personally and the Conners Parent Questionnaire (CPQ) was completed. All of the 1,037 families will complete the CPQ at least every 2 years, and, from this information, new children with hyperactivity or attention span deficits will be identified. Children identified previously as having these symptoms will be followed as to the course of their symptoms. As a further resource, the schools will be asked to complete the Conners Teachers Questionnaire in 1980 and each 2 years thereafter for all 1,037 children. The Dunedin Multidisciplinary Child Development Study staff (directors of this large study) has amassed data on all of the children since birth, their siblings, and their parents and intends to pursue intensive evaluations every 2 years on each of the subject children and their parents. Children who have been identified as high risk are evaluated on a yearly basis.
Duration: 1977-1982.
Cooperating group(s): Dunedin Multidisciplinary Child Development Study of New Zealand.

41-JC-8 URINARY CATECHOLAMINES IN HYPERACTIVE BOYS BEFORE AND DURING TREATMENT WITH D-AMPHETAMINE

Investigator(s): Walid O. Shekim, M.D., Assistant Professor; and James L. Chapel, M.D., Professor and Chief of Child Psychiatry, College of Medicine, University of Missouri, Columbia, Missouri 65212; and Haroutune Dekirmenjian, Ph.D., Director, Biologic Research Laboratory, Illinois State Psychiatric Institute, 1601 West Taylor Street, Chicago, Illinois 60612.
Purpose: To clarify the role of various central biogenic amines in producing and sustaining the hyperkinetic syndrome of childhood.
Subjects: In May 1978: 15 hyperactive boys, ages 7 to 11. All children meet the criteria of DSM II for the hyperkinetic reaction of childhood and of the NIMH-ECDEU Assessment Battery for Pediatrics Pharmacology. A control group was drawn from normal children matched for age, sex, and socioeconomic status. All subjects and control children are of borderline intelligence or better and without gross neurological abnormalities.
Methods: Those children selected for the study were admitted to a research ward after having been free of all medication for at least 2 weeks. The children were given a physical examination, the physical and neurological examination for soft signs (PANESS), and an EEG. Complete psychological and behavioral evaluations were also made. Twenty-four hour urines on 2 successive

days were obtained from the children and measured for urinary metabolites. After 5 to 7 days, subjects were discharged on D-amphetamine 0.5 mg/kg body weight daily and readmitted at the end of 2 weeks when the metabolites were again measured while on destroamphetamines. Values for metabolites in the control group and the subjects both before and during medication were analyzed by a two-tailed students' t-test. All data gathering is done on a research ward geared to handle hyperactive children.

Findings: The hyperactive children, as a group, excreted significantly lower MHPG than the controls. Subjects also excreted significantly higher levels of normetanephrine (NM) than controls. The administration of daily D-amphetamine significantly depressed the excretion of MHPG and NM in hyperactive children compared with the excretion of these metabolites in a drug free state, but the ratio of MHPG to NM was not significantly changed by D-amphetamine.

Duration: 1976-continuing.

Cooperating group(s): (1) University of Missouri Research Council. (2) Missouri Institute of Psychiatry Research Fund. (3) Division of Research Resources; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare. (4) National Science Foundation.

Publications: (1) Shekim, Dekirmenjian, and Chapel. Urinary MHPG excretion in the hyperactive child syndrome and the effects of D-amphetamine. ***Psychopharmacological Bulletin,*** April 1978, 14, 42-44. (2) Shekim, Dekirmenjian, and Chapel. Urinary catecholamine metabolites in hyperkinetic boys treated with D-amphetamine. ***American Journal of Psychiatry,*** November 1977, 134, 11.

41-JC-9 EFFECTS OF METHYLPHENIDATE ON HYPERACTIVE CHILDREN'S EVOKED POTENTIALS

Investigator(s): Rafael Klorman, Ph.D., Associate Professor, Department of Psychology, University of Rochester, Rochester, New York 14627.

Purpose: To assess the effects of methylphenidate on hyperactive children's evoked potentials assessed concurrently with performance.

Subjects: 17 hyperactive boys and 17 normal boys.

Methods: The hyperactive subjects were tested under placebo and 0.3 mg/kg of methylphenidate. The normal subjects were tested without drugs. The late positive component of the evoked response during the continuous performance test was measured.

Findings: Under placebo, the hyperactive children had smaller evoked responses and more errors than normal children. Methylphenidate normalized both sets of measures.

Duration: Summer 1977-completed.

Publications: Information is available from the investigator.

41-JC-10 AN INVESTIGATION OF THE RELATIONSHIP BETWEEN AN ASCENDING MUSICAL STIMULATION CYCLE AND ACTIVITY IN HYPERACTIVE CHILDREN

Investigator(s): Catherine Windwer, Ph.D., Associate Professor, School of Nursing, Adelphi University, Garden City, New York 11530.

Purpose: To determine if an ascending musical stimulation program would reduce the activity of hyperactive children permitting them to attend to learning in the classroom.

Subjects: 13 boys, ages 5½ to 8½, who attended regular classes, were not mentally retarded, and scored in the normal range of intelligence. All subjects had normal hearing, were living at home, and were not taking psychotropic medication.

Methods: The setting was a 40-minute art class in an elementary school. The children in each class were presented an ascending musical progression cycle which lasted 7 minutes. Raters observed the activity of each subject prior to, during, and after the test period using the Motor Activity Rating Scale (MARS). The children had a 5-minute acclimation period at the beginning of the class. A

baseline of activity for each subject was determined by measuring activity for a 5-minute period using MARS. Then the musical tape was played. Activity level was measured during the last 5 minutes of the ascending musical progression cycle. Activity level was again measured for a 5-minute period, 5 minutes after the tape ended. The investigator kept track of each testing period by using a stopwatch, announcing for recording purposes the beginning and end of each trial baseline, musical cycle, and posttreatment periods. Thirteen children were studied in a total of nine classes.

Findings: A repeated measures analysis of variance was performed using movement and weighted intensity as measures of activity. The F ratio for movement was significant ($p < .05$), and the Duncan Multiple Range Test was used to determine where the significant mean differences existed. The mean for the ascending musical cycle scores was found to be significantly greater than the baseline scores ($p < .05$); in addition, the mean for the posttreatment scores was found to be significantly greater than the baseline scores. The F ratio for weighted intensity was also significant ($p < .05$), and again, the Duncan Multiple Range Test indicated significant increases from baseline to ascending musical cycle, and from the ascending musical cycle to posttreatment measurements ($p < .05$).

Duration: January 1978-June 1978.

41-JI-1 INSIDE/OUT: AFFECTIVE EDUCATIONAL TELEVISION ENHANCES CHILDREN'S BEHAVIORAL AND ACADEMIC FUNCTIONING

Investigator(s): Maurice Jesse Elias, M.A., Doctoral Candidate, Department of Psychology, Box U-30, University of Connecticut, Storrs, Connecticut 06268; and Charles F. Nadovich, M.Ed., Educational Supervisor, Leisure School, The Children's Village, Dobbs Ferry, New York 10522.

Purpose: To determine whether television viewing combined with a social problem solving/thinking discussion could enable teachers and therapists to reach children with behavioral, emotional, and learning handicaps.

Subjects: 107 boys, ages 7 to 15, from The Children's Village, a residential treatment center for socially, emotionally, and educationally handicapped boys. Subjects were from poor home situations and from inner city and minority group backgrounds. Their average score was 83 on the Full-Scale Wechsler Intelligence Scale for Children-R. Their average reading ability was 3 years below age level.

Methods: It was hypothesized that measurable, enduring improvements could be obtained by engaging the children in TV program content, stimulating their thinking processes, and helping them take a problem solving approach to interpersonal difficulties. Locus of control, self-concept, teacher ratings, residential cottage ratings, and peer nominations were measured in a prepost intervention 2-month follow-up design. Fifty-two boys received two videotape and discussion programs per week for 5 weeks in their classrooms, with discussions led by teachers and aides. Fifty-seven control boys were assessed only — to control for time, classroom group, and school and residence effects. Chi-square and analysis of covariance were used to assess the data.

Findings: Behavioral and emotional gains were recorded from pre- to posttesting. These gains were significantly maintained over time and generalized to other settings (residential cottages) and behaviors (academic learning) at the 2-month follow-up. High teacher and student satisfaction with the program were reported.

Duration: December 1976-completed.

Publications: (1) A paper presented at the 1978 meeting of the International Association for Children with Learning Disabilities: The use of television and class discussion to improve classroom behavior and learning in learning disabled children. (2) Copies of the paper and various support materials are available from Mr. Elias.

Socially Deviant

41-KA-1 DISCIPLINARY SCHOOL GRADUATE FOLLOW-UP STUDY: CLASS OF 1977

Investigator(s): David Rosoff, Master plus 30 Principal, Daniel Boone Remedial Disciplinary School, Hancock and Wildey Streets, Philadelphia, Pennsylvania 19123.
Purpose: To determine staff's and graduates' attitudes toward the Daniel Boone Remedial Disciplinary School program; to evaluate the type of service that could be provided for future graduates; and to assess the postgraduate plans of the graduates.
Subjects: 25 boys referred at different times to Daniel Boone School for deviant, disruptive, and aggressive behavior. All students receive diplomas from regular high schools but their program and testing for graduation purposes are conducted at Daniel Boone School.
Methods: A survey form, utilized by the School District of Philadelphia, Office of Research and Evaluation to follow up on all high school graduates, was modified to suit the needs of the Daniel Boone Remedial Disciplinary School. In the questionnaire survey students were queried about (1) future plans, school or work; (2) the kind of assistance they received at Daniel Boone School; (3) which staff member helped them most to make future plans; (4) which courses helped them most in their future; (5) other courses they would like to have taken; (6) if the school helped them to graduate; and (7) race or ethnic group. A letter was sent to each home requesting the student's cooperation in completing the questionnaire. When the results were collated, the staff was informed and the information was used to plan progress for future graduates. The respondents were also asked if they required further assistance in terms of employment or postgraduate schooling. The project will be continued on an annual basis.
Findings: Twelve of the 18 graduates were working, three were in school, and six were unemployed. Twelve graduates said they received help with their plans. Most of them reported help with their decisions from more than one school staff member. Three listed only a teacher as a source of help. Ten graduates reported help received from teachers; 11, from counselors; four, from the principal; and two, from the vice-principal. Twelve graduates rated courses as helpful to them after graduation. English (9), Math (7), and Hygiene (6) received the greatest number of mentions. The work study programs served most of the students.
Duration: September 1977-continuing.
Cooperating group(s): School District of Philadelphia, Office of Research and Evaluation.

Juvenile Delinquency

41-KD-1 AFTER THE REFORMATORY

Investigator(s): Thomas G. Eynon, Ph.D., Professor, Department of Sociology, and Director, Social Science Research Bureau, Southern Illinois University, Carbondale, Illinois 62901.
Purpose: To follow up, 20 years later, a study of 2,000 boys released from Ohio Training Schools for delinquents to determine their social adjustment, adult criminal records (if any), and family status.
Subjects: 2,000 males, who, at age 16, were institutionalized delinquents. Subjects are age 36 at time of follow-up.
Methods: This is an ***ex-post-facto*** longitudinal study. Data were previously collected by interview, questionnaire, and record reading. Statistical techniques were used in predicting case outcomes.
Findings: The first sample (1958 group of 517 males) has been located. In this sample, 489 of the 517 subjects have established an adult criminal record.

Duration: 1958-1985.
Cooperating group(s): Ohio Bureau of Criminal Identification.

41-KD-2 ASSESSING THE RELATIONSHIP OF ADULT CRIMINAL CAREERS TO JUVENILE CAREERS

Investigator(s): Lyle W. Shannon, Ph.D., Professor, Department of Sociology; and Director, Iowa Urban Community Research Center, 117 MacBride Hall, University of Iowa, Iowa City, Iowa 52242.
Purpose: To determine whether the characteristics of juvenile criminal careers are a valid prediction of the nature and seriousness of adult careers in crime.
Subjects: Three cohorts: 1,352 persons born in 1942; 2,099 born in 1949; and 2,684 born in 1955. Interviews were conducted with 880 subjects from the 1942 and 1949 cohorts.
Methods: Complete records of police contacts were reviewed for subjects, ages 6 to 26, in the 1942 cohort; ages 6 to 33, in the 1949 cohort; and ages 6 to 21, in the 1955 cohort. Disposition, court decisions, and sanctions imposed were coded from police and court records. Personal interviews were conducted by trained interviewers of the same sex and race/ethnicity as the subject.
Findings: Delinquency and crime are concentrated in terms of seriousness and repetitiveness, but juvenile contacts are so widespread that prediction is not possible.
Duration: April 1974-December 1978.
Cooperating group(s): (1) Max C. Fleischmann Foundation. (2) National Institute for Juvenile Justice and Delinquency Prevention, Law Enforcement Assistance Administration. (3) University of Iowa, Graduate School.

41-KE-1 DELINQUENCY IN A 7TH GRADE COHORT: A LONGITUDINAL STUDY OF THE EFFECT OF SCHOOL EXPERIENCES ON DELINQUENCY

Investigator(s): Carl F. Jesness, Ph.D., Research Manager III; and William E. Wright, Ph.D., Research Analyst II, Division of Research, California Youth Authority, 4241 Williamsbourgh Drive, Suite 216, Sacramento, California 95823.
Purpose: To determine the degree of causal relations between personality and attitudinal characteristics and school experiences and their joint effects on subsequent delinquency.
Subjects: All of the approximately 2,200 students who enrolled in the 7th grade of one school district in fall, 1976.
Methods: The students were surveyed with a variety of instruments at the beginning and end of the 7th grade and at the end of the 8th grade. The battery of measures included the Jesness Inventory; the Positive Behavior Checklist; the Quality of School Life Scale; and a number of items designed to measure a student's attitudes toward family, peers, and school, as well as a measure of self-reported delinquency and experiences as a victim of other students' delinquency. The study is longitudinal and will continue until this cohort reaches age 18. At this time, a search of law enforcement records for official delinquency contacts is planned. Path analysis multiple regression will be used to establish causal inferences among the predictor and criterion variables.
Duration: 1976-1983.
Cooperating group(s): (1) Rosenberg Foundation. (2) Grant Joint Union High School District.

41-KE-2 EFFECTS OF COOPERATIVE AND COMPETITIVE SET ON THE INTERACTION PATTERNS OF DELINQUENT AND NORMAL FAMILIES

Investigator(s): Cole Barton, M.A.; and James F. Alexander, Ph.D., Director of Clinical Training, Department of Psychology, University of Utah, Salt Lake City, Utah 84112.

Purpose: To determine the effects of cooperative and competitive set on the interaction patterns of delinquent and normal families.
Subjects: Families of normal and delinquent adolescent boys, ages 13 to 17.
Methods: Families play Scrabble under two (counterbalanced) sequential conditions: cooperative (total family score generates raffle tickets) and competitive (only the single highest family member's score generates raffle tickets for that person only). A hierarchical (nested) MANOVA will be the primary statistical analysis. Primary dependent measures are scores, and a process analysis will be conducted of defensive and supportive communication patterns.
Duration: June 1977-December 1978.
Cooperating group(s): (1) University of Utah, Biomedical Sciences Grant Committee. (2) University of Utah, University Research Committee.

41-KE-3 SEXUAL ABUSE AND ESCAPE/AGGRESSION INCIDENCE IN JUVENILE DELINQUENTS

Investigator(s): John W. Reich, Ph.D., Associate Professor; and Sara Gutierres, Graduate Student, Department of Psychology, Arizona State University, Tempe, Arizona 85281.
Purpose: To determine if children who earlier were reported for sexual abuse in later life develop juvenile delinquency crime patterns of aggressiveness or patterns of escape and runaway infractions.
Subjects: Sample 1: 20 girls and boys, ages 10 to 15, who had been reported to authorities for being sexually abused. Sample 2: 747 juvenile delinquents, ages 10 to 15, who had not been reported for either sexual or physical abuse.
Methods: To test for the accuracy of the apparently wide-spread notion that abuse (both physical and sexual) leads to later aggressiveness in children, two samples of juvenile delinquents were developed. The experimental sample was composed of 153 children referred to the Arizona Department of Economic Security Child Protective Services office for abuse. Of these children, 20 had been referred for sexual abuse. This set of cases was then compared to the juvenile files of the Maricopa County (Arizona) Juvenile Court Center, and patterns were determined of juvenile crimes for which the children had been arrested. This sample was compared to the crime patterns of a random sample of 747 juveniles for whom there had been no earlier report of abuse. The crime patterns were based on the assumption of psychologically important differences between juvenile crimes involving aggression (fighting, aggravated assault, disturbing the peace, etc.) and so-called escape crimes (runaway, missing juvenile, truancy). The former were defined for this project as indicating a hostile and basically antiperson psychological state; whereas, the escape crimes were defined as nonaggressive and asocial in their psychological origins. Chi-square tests were performed to determine the significance of the differences in crime frequencies between the experimental (sexual abuse) sample and the control (nonabused) sample for aggressive and escape crimes.
Findings: The results indicated that sexually abused children had a significantly higher frequency of escape crimes than did the controls and did not differ from controls on aggressive crimes. The data thus offer no support to the belief that sexual abuse leads to more aggressive behavior. The data do support the prediction that sexual abuse leads to later asocial behavior in the form of escape and runaway infractions, when and if the children are actually arrested and reported for antisocial behavior. It is concluded that sexual abuse does not lead to an increase in aggressive behavior. It is also concluded that sexual abuse does lead to an increase in asocial behavior such as escape and runaway behaviors.
Duration: December 1977-July 1978.

41-KJ-1 ATTITUDES TOWARD PARENTS AND DELINQUENCY

Investigator(s): David F. Duncan, Dr.P.H., Associate Professor, Department of Health Science, State University College of New York, Brockport, New York 14420.

Purpose: To determine whether or not there was a greater generation gap between delinquents and their parents than between nondelinquents and their parents.
Subjects: 25 delinquent, white, suburban males and a matched group of nondelinquents. Groups were matched for age, grade in school, and parental income level.
Methods: An 18-item attitude scale was administered to both groups as a case control study.
Findings: The delinquent youths held significantly more negative attitudes toward their parents than did the nondelinquent youths.
Duration: Completed.

Corrections

41-KR-1 AN EVALUATION OF THE EFFECTIVENESS OF GROUP HOME PROGRAMS IN FACILITATING POSITIVE CHANGES IN JUVENILE OFFENDERS

Investigator(s): Stanley Friedman, Ph.D.; and James E. Cowden, Ph.D., Bureau of Program Resources; and Peter Stacy, M.S.W., Bureau of Community Corrections, Research Program, Wisconsin Division of Corrections, P.O. Box 669, Madison, Wisconsin 53701.
Purpose: To evaluate personal and family backgrounds, offense histories, and the problems of juvenile offenders from Region V in Wisconsin, who are placed in various group home programs.
Subjects: 60 juvenile offenders from Region V in Wisconsin (and later, if Program Resources staff are available, a sample of at least 40 juveniles from Region VI). As part of this evaluation, an attempt will also be made to gather normative data on the Jesness Inventory and a checklist from samples of nondelinquent juveniles from several high schools in Wisconsin.
Methods: A description will be made of the kinds of programs available within the various group homes in Region V. An attempt will be initiated to evaluate the efficacy of the use of background data and Jesness Inventory data as a means of selecting which juvenile offenders (with which kinds of problems) are most appropriate as candidates for the various group home programs. The criterion for selection will involve prepost comparisons of attitudes and behavior within the group homes and for a defined period (up to 1 year) following their release from the group homes. Attitude changes while residing in the homes will be measured by successive administrations of the Jesness Inventory (not more than three administrations in a 6-month period), by monthly administrations of the Jesness Checklist, and of sociometric questionnaires. Behavior changes will be measured by Jesness checklists completed by home staff members, and through the use of other behavior ratings as needed. Adjustment after release from the group homes will be measured by ratings derived from probation-parole reports and by an assessment of comparative recidivism rates of the subjects. Multiple regression and/or discriminant function techniques will be used (depending upon the nature of the criterion variables) to assess the predictive significance of the scales of the Jesness Inventory to determine which juvenile offenders would be the best candidates for various group home programs. The final phase of this project will focus on the construction and cross-validation of specific cutting points on those scales found to have the greatest degree of predictive significance for the criteria described above.
Duration: May 1978-October 1979.

41-KR-2 EVALUATING THE EFFECTIVENESS OF COMMUNITY GROUP HOME BASED TREATMENT OF JUVENILE OFFENDERS: A STUDY OF SOCIAL SKILLS TRAINING AND MILIEU THERAPY APPROACHES

Investigator(s): James E. Cowden, Ph.D.; Thomas Bassett, Ph.D.; and Eugene H. Strangman, Ph.D., Researchers, Bureau of Program Resources, Research Program, Wisconsin Division of Cor-

rections, P.O. Box 669, Madison, Wisconsin 53701; and Roberta S. Ray, Ph.D., Assistant Professor; and Richard M. McFall, Ph.D., Professor, Department of Psychology, University of Wisconsin, Madison, Wisconsin 53706 (Consultants, Wisconsin Division of Corrections).

Purpose: To describe and evaluate the treatment programs and treatment outcome of two community group home programs for male juvenile offenders.

Subjects: The resident populations of Waples House and Meridian House, two community group home programs for male juvenile offenders in Appleton, Wisconsin. The juvenile population of Wisconsin Division of Corrections institutions (a tertiary subject population insofar as demographic data or normative data on tests routinely administered and on recidivism) will be utilized in comparing community group home based treatment to institutional treatment of juvenile offenders.

Methods: An external evaluation team, independent of the treatment staff in either facility, will be responsible for the design and implementation of a systematic data collection program to be carried out at Waples House and Meridian House. Specifically, the evaluation team will collect data using a diverse set of criterion measures aimed at describing (1) the study population in terms of relevant demographic and psychosocial variables; (2) the treatment models as they develop and as they are viewed by residents, staff, and community members; (3) the process, outcome, and maintenance of program gains for each resident and for residents of the Waples House program compared to the Meridian House program; (4) the impact on the community of the community group home; and (5) the cost effectiveness and cost efficiency of the group home in contrast to institutional treatment. The subjects will be pre- and posttested using the California Psychological Inventory, Wide Range Achievement and Vocabulary Tests, Jesness Inventory and Jesness Behavior Checklist, Rotter Internal-External Locus of Control Scale, Adolescent Problem Inventory, and the Tennessee Self-Concept Inventory. Residents, staff members, and community members will complete the Moos Community-Oriented Programs Environments Scale. Community members include juvenile court staff, police, school administrators, and members of local service agencies.

Duration: January 1977-July 1978.

41-KR-3 EVALUATION OF THE EFFECTS OF ALTERNATE PLACEMENT COMPARED TO INSTITUTIONALIZATION AS A REHABILITATION TREATMENT MADE FOR JUVENILE OFFENDERS

Investigator(s): James E. Cowden, Ph.D., Chief Psychologist-Supervisor, Research Section, Bureau of Clinical Services, Research Program, Wisconsin Division of Corrections, P.O. Box 669, Madison, Wisconsin 53701.

Purpose: To gather data on the characteristics of juvenile offenders who are retained in institutions vs. those who are placed in alternative care facilities; and to evaluate which kinds of offenders (i.e., with which kinds of problems) appear to benefit most from placement in alternative care facilities within the community.

Subjects: Male juvenile offenders originally committed to Lincoln Hills or Ethan Allan School and subsequently placed in alternative care programs during the first 9 months of 1976. These subjects will be compared to a randomly selected sample of 100 male juveniles admitted in the first 9 months of 1976 who stayed at either of these institutions for at least 6 months.

Methods: Information on the samples will be gathered from test results, background information in files, including follow-up ratings of adjustment in the institutions and in the various alternate placement facilities, along with additional ratings made of their adjustment for a period of up to 1 year following their release. Characteristics assessed will include age at admission, family background, school adjustment, current offense, previous offense record, and numbers of contacts with social agencies and law enforcement officials, as well as ratings of peer and adult relationships. Pretesting will include the usual admission test battery given at juvenile reception centers. The Jesness Inventory will be given approximately 6 months later. Changes between the pre- and posttesting for all samples will be done to determine what differences exist between the two

samples in pretest level of adjustment and in relative changes in adjustment as measured by the test scales. Comparisons in follow-up adjustment (measures of behavioral problems, progress in school, etc., and recidivism) will be made to determine which kinds of boys show the most benefit from either program, and whether those who show the most positive prepost test changes continue to show a positive behavioral adjustment for a defined time period afterwards. Criteria will be developed for making decisions for or against alternate placement for specific juveniles exhibiting certain kinds of background characteristics, offense histories, problems, or personality correlates. Institutional programming, treatment, and cost will be compared to that of alternate placements, along with comparison of the postrelease adjustment of juveniles in institutions and alternate placement.

Duration: April 1977-December 1978.

41-KR-4 THE MICHIGAN RESIDENTIAL FACILITIES PROJECT

Investigator(s): James Evans, Office of Family and Youth Services; Reginald Carter, Social Services Evaluation and Analysis, Bureau of Finance; Bob Smith, Population Projection Study; and Larry Max, Comparative Outcome Study, Michigan State Department of Social Services, 300 South Capitol Avenue, Lansing, Michigan 48193.

Purpose: To begin the process of systematic planning for youth treatment facilities in Michigan by studying the potential need for residential care and treatment facilities from the present to 1990, and by focusing on the types of youth who are best served in different treatment facilities.

Subjects: Study I: A population projection was made on the basis of 30,000 boys and girls, ages 0 to 18, presently in residential facilities in Michigan. Study II: 960 delinquent youths released from Department of Social Services placements over a 3-year period (placements ranged from high structure institutional settings to low structure group home and own home situations).

Methods: In the Michigan Facilities Population Projection Study, the future needs for residential care bed space were examined, particularly for delinquent state wards. The strategy adopted was to project the current placement distribution of Department of Social Services and court delinquent and neglect wards on the basis of expected population trends to 1990. The Comparative Outcome Study examined (utilizing a cross-tabulational analysis and a variety of other statistical tools) correlations among client characteristic data (i.e., age, sex, race, age at program entry, and level of aggressiveness); placement type; and recidivism rates.

Findings: Study I: The major factor in the present pressure for institutional placement was judged to be the significant decline in the truancy rate from almost four youths in 10 (1973) to one in 10 (1978). It was hypothesized that a program to significantly reduce truancy and a program to make that program more effective could result in a shorter than average length of stay and thereby reduce the average census proportionately. Study II: It was suggested that certain characteristics of clients (age, sex, race, age at program entry, and level of aggressiveness) in combination with specific placement types are associated with higher or lower rates of recidivism. Aggressive felons do best in institutions; status offenders do best outside institutions. Further research is desirable to explore the variables that can increase the success rates of juvenile clients and reduce criminal behavior.

Duration: September 1977-June 1978.

Publications: A report is available from the investigators for $5.00.

41-KR-5 JUVENILE SERVICE DELIVERY SYSTEM EVALUATION

Investigator(s): Steven Kronzer, M.S., Executive Budget Officer; and Pam Brandon, B.S., Administrative Budget Analyst, Department of Administration, State Budget Office, Room B-114, 1 West Wilson Street, Madison, Wisconsin 53702.

Purpose: To study services provided to a juvenile prior to placement in a state juvenile correctional institution; to relate prior services to criminal history; and to develop outcome data.
Subjects: 133 boys and 35 girls, ages 13 to 18, released from state juvenile correctional institutions between July 1, 1976 and December 31, 1976. This sample represented 45% of all releases during that period.
Methods: The data studied included the standard reported data in addition to data collected from the juvenile's case file. The investigators developed a unique index to compare criminal offense history and prior services.
Findings: Over 51% of the sample were not tried in any out-of-home placement prior to institutionalization. Placement of the last resort for a majority of the subjects is not in state facilities. Criminal behavior of this 51% of the subjects does not explain the lack of prior services.
Duration: October 1977-August 1978.
Cooperating group(s): Wisconsin Division of Corrections.
Publications: Copies of research findings are available from the investigator.

41-KS-1 CRISIS INTERVENTION PROJECT WITH STATUS OFFENDERS

Investigator(s): Martin Kohn, Ph.D., Director of Research; and Gilda F. Epstein, Ph.D., Research Psychologist, Family Court Services, South Beach Psychiatric Center, 777 Seaview Avenue, Staten Island, New York 10305.
Purpose: To test specific hypotheses dealing with the possibilities of diversion of PINS (status offenders) cases from the Family Court system and the evaluation of alternate treatment approaches.
Subjects: 48 PINS (status offenders), ages 12 through 15, approximately equal numbers of both sexes, who were referred by the Probation Intake Department of the Staten Island Family Court. These offenders had no previous record of delinquency.
Methods: The hypotheses being tested include (1) that the PINS (status offense) petition is brought at a time of crisis which has disrupted family equilibrium, (2) that the crisis situation is a family crisis involving all members and not simply a problem with the child designated as the PINS respondent, and (3) that family oriented crisis intervention aimed at restoring family equilibrium is the treatment choice in PINS cases. Outcome variables to be used include (1) rate of success in diverting cases from court, (2) rate of remands to temporary detention of respondents, (3) therapist ratings of degree of success in restoring family functioning to previous level of equilibrium, (4) rate of case referrals to long-term treatment and rate of successful referral to appropriate treatment programs, (5) rate of institutional placements of respondents, and (6) recidivism rates of juveniles in follow-up studies of subsequent status offenses or delinquencies. All cases are assigned randomly to one of two treatment groups: one group will receive intensive family oriented crisis intervention treatment for 6 weeks; the other group will receive regular outpatient treatment. Extensive demographic background data are collected on families and life experience and school history of juveniles. Research interviews are conducted with mother and child in all cases. The parent interview covers demographic information, life stresses, chronic problems and discontinuities in family history, and information on kinship and community support systems available to the family. The child interview includes testing and the instruments used are (1) Wechsler Intelligence Scale for Children – Revised (WISC-R), four scales; (2) Wide Range Achievement Test, Reading; (3) Schaefer Parent Behavior Inventory; (4) Self-Report of Attitudes toward Delinquency; (5) Crowne-Marlowe Personal Reaction Inventory; and (6) Geller House Juvenile Social Adjustment Scale. Data on treatment sessions are collected, and interviews with therapists are conducted to record assessments of family structures and functioning, and to monitor ongoing developments in each case being followed.
Findings: Preliminary results appear to support Hypothesis 2 decisively, and Hypotheses 1 and 3 with the added amendment that many PINS families function in a context of constantly recurring crises and require referral for long-term counseling, following the crisis intervention period, to support their shaky family functioning.

Duration: December 1977-December 1978.
Cooperating group(s): Staten Island Family Court Services.
Publications: Kohn, M. and Sugarman, N. Characteristics of families coming to the family court on PINS petitions. ***Psychiatric Quarterly,*** 1978, 50(1).

41-KS-2 **JUVENILE INSTITUTIONALIZATION AND ADULT CRIME: A STUDY OF THE CAREERS OF YOUTHS COMMITTED TO WISCONSIN CORRECTIONAL INSTITUTIONS**

Investigator(s): John Flanagan, Ph.D., Professor of Social Work; Nachman Sharon, M.S.S.W., Ph.D., Candidate in Social Welfare; and Lee Wright and Steven Lehman, Graduate Students in Social Work, Department of Social Work, University of Wisconsin, Madison, Wisconsin 53706.
Purpose: To establish the relationship between juvenile institutionalization and subsequent adult criminality.
Subjects: The sample consists of all or half of first admissions to Wisconsin correctional institutions for juvenile males during the year 1965. (The total number of cases examined is expected to be between 400 and 800, depending on the constraints of time and manpower. This will be determined after the pretest.)
Methods: A questionnaire will be the main instrument used in the study. Additional data will be retrieved from active files, nonactive files, and microfilms which are stored in the Wisconsin Division of Corrections record archives. Analysis of the data will be done on two levels. On the first level, univariate relations will be examined; specifically, correlations and chi-square statistical tests will be used to study relationships between pairs of critical variables. The second level of analysis will involve multivariate manipulations and interactions between groups of variables to determine cumulative effects of more than one dependent variable on the studied phenomena. Statistical methods at this level of analysis will include multivariate methods such as the Automatic Interaction Detection used by Division of Corrections analysts in a series of studies on institutional recidivism carried out in 1964-65.
Duration: Continuing.
Cooperating group(s): Wisconsin Division of Corrections, Research Program.

THE CHILD IN THE FAMILY

Family Relations

41-LA-1 PARENTS' ATTITUDES TOWARD THEIR CHILDREN AND ADOLESCENT BEHAVIOR PROBLEMS

Investigator(s): Robert S. Gold, Ph.D., Assistant Professor; and David F. Duncan, Dr.P.H., Associate Professor, Department of Health Science, State University College of New York, Brockport, New York 14420.
Purpose: To determine whether parental attitudes toward their adolescent son or daughter reflect the level of the child's behavior problems; and to determine whether a greater generation gap correlates with greater adolescent deviance.
Subjects: Members of a parent group in a rural/suburban community. Both parents of subject families participated in the study. Subjects were from white, middle class families with teenagers.
Methods: An 18-item attitude scale and questionnaire about problems with their teenage son or daughter were administered to the parents. The association between behavior reports and parental attitude was assessed.
Duration: May 1978-July 1978.
Cooperating group(s): Genesee Regional Health Education Program.

41-LA-2 FORMULATION OF NATIONAL POLICIES ON CHILD AND FAMILY DEVELOPMENT

Investigator(s): Irving Lazar, Ph.D., Chairman; and Elizabeth Reilinger, M.S., Project Coordinator, Department of Community Service Education, 135 MVR, Cornell University, Ithaca, New York 14853.
Purpose: To develop policy recommendations on child and family development for the Administration for Children, Youth, and Families.
Methods: The focus of this research is on policy issues within the current social and economic arrangements and within a limited temporal reach (e.g., the next decade). Policy recommendations will emphasize child and family related services and research. Three sources of input will be utilized: (1) experts and professionals across the country who will prepare extended position papers, (2) the Cornell Family Policy Seminar (a multidisciplinary faculty group), and (3) the six-and-a-half million members of the National PTA.
Duration: October 1978-September 1979.
Cooperating group(s): (1) National Parent-Teacher Association. (2) Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

41-LA-3 FORMULATION OF NATIONAL POLICIES FOR CHILDREN, YOUTH, AND FAMILIES

Investigator(s): Georgia White Brandstadter, Ph.D., Project Co-Director; and Becky Schergens, Executive Director, National Parent-Teacher Association, 700 North Rush Street, Chicago, Illinois 60611; and Irving Lazar, Ph.D., Professor and Chairman, Department of Community Service Education, 135 MVR, Cornell University, Ithaca, New York 14853.

Purpose: To study peoples' opinions concerning major issues that affect children, youth, and families.

Subjects: Members of the 29,480 PTA units throughout the United States.

Methods: PTA units select two major issue packets that were prepared for them in conjunction with the College of Human Ecology at Cornell University. In special meeting time, PTA unit staff discuss the issues they have selected, record their votes and recommendations on a special response sheet, and return it to the National PTA Office. A computer will record the data using zip codes.

Duration: September 1977-September 1978.

Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

Publications: A final report will be submitted to the Administration for Children, Youth, and Families.

41-LA-4 A CONTROLLED EVALUATION OF PARENT SELF-HELP GROUPS IN A PREMATURE NURSERY

Investigator(s): Klaus Minde, M.D., F.R.C.P.(C), Director; and Peter Marton, Senior Research Assistant, Psychiatric Research Unit, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, Canada M5G 1X8; and Carl Corter, Ph.D., Associate Professor; and Sandra Trehub, Ph.D., Assistant Professor, Department of Psychology, Erindale College, University of Toronto, Toronto, Ontario, Canada M5S 1V6.

Purpose: To evaluate the effect of a support system utilizing peers and professionals as resource personnel on parent-infant interaction, parental confidence and understanding of their infant's needs, and family adaptation to the birth of a premature infant.

Subjects: 70 infants with a birthweight of less than 1,501 grams, who are singleton births and have no physical malformation or evidence of a severe neurological insult; and their parents, who meet the following criteria: English speaking, live within 15 miles of The Hospital for Sick Children, and intend to keep their baby.

Methods: The subjects are assigned to treatment or control conditions in cohorts of six to form two groups of 35 subjects each. The treatment group meets weekly for 2 hours while the infant is in the hospital. Group composition consists of 4 to 10 parents (couples and single parents), a *veteran* parent of a premature infant, a nurse coordinator, and various professionals who serve as resource personnel for specific topics of interest to a particular group. The control group receives routine care but is administered the same assessment measures as the treatment group. Continuous observations of mother-infant interaction are made by two observers using a digital event recorder capable of recording up to 64 simultaneous events. The records consist of a 12-item behavior code for infants and a 10-item code for mothers. They are directly entered into a computer for data storage and analysis. Observations are made up to twice a week in the hospital during nursery visits, once during each of the first 3 months at home while the mother feeds the infant, and once when the infant reaches a year (corrected age) during a feeding and a play period. A record of parental visits to the ward is kept by ward staff. Demographic and background variables are assessed during a semistructured psychiatric interview with both parents a month after the infant's birth. Family adaptation is assessed by a similar interview at the 1-year follow-up. Parental confidence in their caretaking role and understanding of their infant's condition and needs are assessed, using a rating scale, with clearly defined intervals, completed by a psychologist after a structured interview. Family adjustment to the infant and infant adaptation to the home are also assessed by a schedule completed by the mother of the infant's activities and interactions during the 24 hours prior to each of the three home visits and the follow-up visit at a year.

Findings: Parents participating in the self-help groups visited their infants more frequently, were more satisfied with the medical treatment, had a better understanding of their infant's condition, were more aware of community resources, and were more confident in their caretaking skills.

Initially both groups of mothers had a similar rate of behavior, but from the third week on, the treatment group tended to interact more with their infants. Significant differences were found in touching during weeks 3, 4, and 5; looking in face during week 3; and talking to the infant during week 5. These findings are based on 16 treatment and 16 control families.
Duration: July 1976-December 1978.
Cooperating group(s): (1) Health and Welfare, Canada. (2) Laidlaw Foundation.
Publications: Minde, K. ***et al.*** Mother-child relationships in a premature nursery: An observational study. ***Pediatrics,*** 1978, 61(3), 373-379.

41-LB-1 SURROGATE MOTHERHOOD

Investigator(s): J.P. Miller, Ph.D., Associate Professor, School of Social Work, Michigan State University, East Lansing, Michigan 48824.
Purpose: To investigate the psychological/social variables involved in choosing to become a surrogate biological mother for another couple unable to bear children.
Subjects: Six surrogate mothers, ages 22 to 27. Most of the subjects are high school or college graduates and are employed.
Methods: Data have been collected through an open-ended interview instrument.
Findings: The sample is too limited for any generalizations. The only existing common element that has been found is the acceptance of the state of pregnancy as a psychologically/physically pleasurable period.
Duration: September 1977-September 1979.

41-LC-1 POSTDIVORCE FAMILY RELATIONSHIPS, SCHOOL PERFORMANCE, AND SOCIAL RELATIONS IN PREADOLESCENT CHILDREN

Investigator(s): Robert D. Hess, Ph.D., Professor, School of Education, Stanford University, Stanford, California 94305.
Purpose: To examine the effects of ongoing relationships among members of a divorced family upon the social and academic adjustment of young children; to describe postdivorce family interactions; and to identify the family variables most closely related to child outcomes.
Subjects: 20 single mothers-with-custody, their children, ages 9 or 10, and divorced husbands; 20 two-parent households with 9- or 10-year-old children; and 10 divorced women, their children, ages 9 or 10, and a live-together male partner. All subjects are middle class, Caucasian, and divorced approximately 3 years.
Methods: Information is gathered from each subject through interviews, which cover (1) the child's social behavior, (2) the level of conflict between the divorced couple, (3) visiting arrangements of the child and parent-without-custody, (4) the daily interaction between child and parent-with-custody, (5) stability and predictability of the child's daily environment, (6) the degree to which the conflict of divorce has been resolved, and (7) whether the parents see the divorce as final. The child interview includes concepts of family and of divorce and a role playing technique in which the child describes to another child what the experience of divorce might mean. Data are also collected on the child's academic performance through test scores and teacher's rating of classroom behavior and social interaction with peers. The children's test scores include quantitative and verbal subtests, spatial measures, and perspective taking tasks. The analysis follows two approaches: (1) to test for differences among the three different family structures (single parent household, two-parent household, and the live-together partners household); and to examine intercorrelations between major dimensions of family interaction (predictability of routine level of conflict, degree of resolution on divorce, etc.) and child outcome measures.
Duration: January 1977-March 1979.
Cooperating group(s): (1) Crocker Trust. (2) Boys Town.

41-LF-1 MINIMUM CEREBRAL DYSFUNCTION AND THE GENERATION GAP

Investigator(s): Joyce A. Sween, Ph.D., Associate Professor, Department of Sociology, DePaul University, 2323 North Seminary Avenue, Chicago, Illinois 60614; and Richard Markin, Ph.D., Clinical Psychologist, McGrath Clinic, Palos Heights, Illinois 60463.

Purpose: To investigate the correlation between neurological abnormalities in children diagnosed as having learning disabilities/behavior disorders and the childhood behavior of their parents.

Subjects: A subsample of 84 natural born children who were living with both parents. The subsample was derived from 101 children seen in a private psychiatric clinic between 1973 and 1975 for learning and behavior problems. Sixty-two percent of these patients were between ages 6 and 11 at time of admittance to the clinic. 67% were males. Fathers' average age was 41.5 years; mothers' average age was 36.8.

Methods: Data from the children's pediatric neurological examinations were matched with a variety of childhood experiences and symptoms reported by their parents in order to examine the relationships existing across generations.

Findings: The data showed a strong correlation existed between childhood symptoms reported by parents and clinical signs in their offspring. Further research is suggested to determine whether the screening of parents would be fruitful in order to identify high risk offspring.

Duration: 1976-1979.

Publications: A paper presented at the meeting of the American Association for the Advancement of Science, Washington, D.C., February 1978: MCD and the Generation Gap.

41-LF-2 MATERNAL NARCOTIC ADDICTION AND CHILD DEVELOPMENT

Investigator(s): Geraldine S. Wilson, M.D., Assistant Professor of Pediatrics, Baylor College of Medicine, 1200 Moursund, Houston, Texas 77030.

Purpose: To determine whether chronic intrauterine exposure to pharmacologic agents (specifically, narcotics) is associated with an increased incidence of disturbed growth, neuromotor function, learning, or behavior in children.

Subjects: 30 children exposed to heroin (intrauterine exposure); 30 children exposed to methadone (intrauterine exposure); and 58 children from drug free mothers. This is the 5th year of a longitudinal study and 67 girls and 51 boys, currently ages 1 to 4, have been followed since before birth.

Methods: All subjects are examined at ages 1½, 3, 6, 9, 12, 18, and 24 months, and afterwards at yearly intervals until they reach their 6th year. At each visit, the children will be measured for somatic growth, evaluation of subacute withdrawal symptoms; and physical and neurological examinations will be conducted. Developmental and psychological evaluations will be performed at each visit according to the following schedule: (1) Knobloch-Pasamanick Developmental Screening Inventory (1½, 3, and 6 months); (2) Gesell Developmental Schedules (12 months); (3) Bayley Scales of Infant Development (9, 18, and 24 months); (4) McCarthy Scales of Children's Abilities (3 and 4 years); (5) Illinois Test of Psycholinguistic Abilities (5 years); (6) Bender-Gestalt Test (5 and 6 years); and (7) Wechsler Intelligence Scale for Children (6 years). At each clinic evaluation, behavioral assessments will be made by the project nurse and by the staff psychologist. Evaluations of the home and family will be made at varying intervals throughout the span of the project by the staff social workers. The Caldwell Home Inventory will be administered when the child is 2½, and the Roth Mother-Child Relationship Evaluation, when the child is 3½.

Duration: June 1974-June 1982.

Cooperating group(s): National Institute of Drug Abuse; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-LG-1 EFFECT OF THE CHRONICALLY ILL EPILEPTIC CHILD UPON THE FAMILY SYSTEM

Investigator(s): David N. Grove, Ph.D., Director, Applied Research, Child Neurology Clinic, Good Samaritan Hospital and Medical Center, 2222 N.W. Lovejoy, Suite 361, Portland, Oregon 97210; and Buell E. Goocher, Ph.D., Director, Edgefield Lodge, Inc., 2408 S.W. Halsey, Troutdale, Oregon 97060.
Purpose: To determine the impact of an epileptic child on family interaction patterns.
Subjects: 25 epileptic children, ages 6 to 12, and their families; and 25 normal children, ages 6 to 12, and their families.
Methods: The study is using a cross-sectional and longitudinal design. Data are collected using a coded naturalistic observation system which documents, consecutively, the interactional patterns of every family member. Portable EEG telemetry will also be employed with epileptic children. Normative data will be obtained from nonepileptic children and their families.
Duration: March 1978-February 1981.
Cooperating group(s): National Institute of Child Health and Human Development; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.
Publications: Progress reports will be published periodically during the project.

41-LG-2 ASSESSMENT OF A MOTHER-CHILD INTERACTION MEASURE FOR HANDICAPPED INFANTS

Investigator(s): Arthur H. Parmelee, M.D., Professor of Pediatrics; and Head, Division of Child Development, 22-474 Marion Davies Children's Clinic; and Judy Howard, M.D., Medical Director, UCLA Intervention Program for Developmentally Handicapped Infants and Children, 23-33 Rehabilitation Center, University of California, Los Angeles, California 90024.
Purpose: To assess an instrument for systematic observation of mother and child interaction in a play setting; and to assess the impact of 9 months of educational intervention on the quality of mother-child interaction.
Subjects: 19 handicapped infants and mothers with 19 age and sex matched controls.
Methods: It was hypothesized that educational intervention does improve the interaction between handicapped child and mother. Mother and child were observed in a standard play setting prior to intervention and 9 months later. The instrument measured affective, language, and play aspects of interaction.
Findings: Handicapped infants were less effective than control infants in all aspects of interaction. Parents of handicapped infants were less effective than the control group in the language and affective aspects of interaction. Parents of handicapped children were equally as effective as the controls in play skills. Intervention had a significant impact on the affective and language aspects of parents' interaction skills. There was no impact seen in the infants' behavior during interaction after intervention.
Duration: July 1974-June 1977.

Childrearing

41-MA-1 CHILDREARING OF YOUNG WHITE MOTHERS

Investigator(s): Lucille J. Grow, Ph.D., Research Associate, Child Welfare League of America, Inc., 67 Irving Place, New York, New York 10003.
Purpose: To study the relationship between social, behavioral, and attitudinal characteristics of white primiparous mothers and the subsequent well-being of the mother and her firstborn child.

Subjects: The initial study population consisted of 448 white married and unmarried women and their firstborn children. The mothers were under age 25 at the time of their first live birth, and, at the time of the birth, all of the mothers were planning to keep their child.

Methods: The mothers were interviewed in their homes shortly after the baby's birth, when the child was 1½ years of age, and again when the child was 3 years old. The major data collection instruments were interview schedules containing both open-ended and closed response questions. The Langner 6-Item Psychiatric Impairment Test was used at all three interviews. At Times 2 and 3, the Rosenberg Self-Esteem Scale and the Thomas-Zander Ego Strength Scale were administered. At Time 3, the children's adjustment was tested by the Louisville Behavior Check List. The chi-square test of significance and multiple regression were used for data analysis.

Findings: At Time 3, 411 of the 448 mothers were located. Contrary to expectations, marital status, age, and socioeconomic status proved to be relevantly insignificant factors on most measures of the mothers' and children's adjustment. The factors most closely related to the mother's adjustment were her psychiatric impairment, the number of perceived but unavailable community resource needs, her attitudes toward her pregnancy, and the degree of permissiveness in matters of child care. The factors most closely related to the child's adjustment were the mother's contentment with herself and in her child care role, mother's use of corporal punishment, and the child's physical health.

Duration: June 1973-July 1978.

Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

41-MA-2 ASSESSING THE CHILD DEVELOPMENT INFORMATION NEEDED BY ADOLESCENT PARENTS WITH VERY YOUNG CHILDREN

Investigator(s): Ann S. Epstein, Ph.D., Research Associate, High/Scope Educational Research Foundation, 600 North River Street, Ypsilanti, Michigan 48197.

Purpose: To gather pre- and postnatal information on the child development knowledge of teenage parents; and to observe the relationship between this knowledge and their parenting skills with their 6-month-old infants.

Subjects: 125 primiparous adolescents, ages 19 and under, from southeastern Michigan. The subjects vary in background: geographical (urban, suburban, and rural); socioeconomic status (middle and working class); and ethnicity (black or white).

Methods: Adolescents are interviewed pre- and 6 months postnatally. Knowledge of early childhood development is measured with various techniques including card sorting and teenagers' descriptions of videotaped mother-infant interaction sequences. Adolescents and their infants are videotaped, and tapes are coded using the Parent-Infant Interaction Checklist. Teenagers' knowledge of child development and demographic characteristics are used to predict parenting styles.

Duration: September 1977-September 1979.

Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

Publications: Interim and final reports are available from the investigator.

41-MB-1 CHILDREARING FATHERS AND FATHER-REARED PRESCHOOLERS

Investigator(s): Norma Radin, Ph.D., Professor, School of Social Work, University of Michigan, Ann Arbor, Michigan 48109.

Purpose: To explore some antecedents and consequences of paternal childrearing of preschoolers in white, intact families.

Subjects: 60 white, middle class families that include a mother, father, and preschool child.

Methods: Three groups were compared: families in which the father was the prime caregiver, families in which the mother was the prime caregiver, and families in which child care was evenly divided. Fathers and mothers were interviewed separately and children were given tasks in their own homes. Children were present during the father's interview, which was tape recorded so that the father's childrearing practices could be documented.
Duration: September 1977-September 1978.

41-MB-2 STUDY OF PARENTS' INFORMATION, CHILDREARING PRACTICES, AND CHILD DEVELOPMENT OUTCOMES IN PUERTO RICO

Investigator(s): Ligia V. Rodriguez, M.A., Project Director, Health and Social Studies, Inc., Esquire Building, Suite 401-A, Ponce de Leon and Vela Streets, Hato Rey, Puerto Rico 00918.
Purpose: To identify parents' information on child development; to ascertain patterns of childrearing practices; to investigate the level of child development in Puerto Rico; to study parents' perception of child development information needs; and to study how perceived parental needs relate to the use or nonuse of family support services.
Subjects: From 3,000 families, a sample was selected of 473 families with children, ages 6 months to 4 years. The families were distributed throughout the Island of Puerto Rico.
Methods: A questionnaire was administered to mothers or caretakers responsible for the child's rearing to obtain data related to family characteristics, childrearing patterns, the families' information about child development and needs for more information, and the use of family support services for their child development information needs. The questionnaire involved social, cultural, and economic factors. An instrument (Alpern and Boll) and an interviewer's observation scale were used to measure the development of the children. At the same time, a substudy was designed to be carried out with 6-month-old infants born in July 1977 based on a longitudinal approach with observation and interviewing at regular intervals. The study group consisted of 60 babies from a small town and a rural community in the central mountain area, a large urban community on the north coast of the island, and a city on the western coast. Interviewers have visited 353 families from the main study, completed interviews with 276 cases, and 77 families have been eliminated from the sample. Each of the 60 families of the longitudinal study have been visited four times. Protocols are completed, including a diary of the observer's report of the children's behavior, family interaction, and everyday experiences. Data analysis began in July 1978, and during the first period, will be descriptive. A set of multiple regressions will test the main hypothesis; a series of contingency chi-squares will be performed utilizing the demographic information; and a series of McNewman's test of changes will be performed on the longitudinal data. The main study will terminate in September 1979; the longitudinal study, in which families will be visited twice a year, will continue a few more years.
Duration: October 1977-continuing.
Cooperating group(s): Department of Health, Puerto Rico.
Publications: Several publications in Spanish and English, a final report, and a monograph will be prepared. Information is available from the investigator.

SOCIOECONOMIC AND CULTURAL FACTORS

41-NA-1 GUESTWORKER CHILDREN IN THE FEDERAL REPUBLIC OF GERMANY

Investigator(s): Ray C. Rist, Ph.D., Visiting Professor, College of Human Ecology, Cornell University, Ithaca, New York 14853.
Purpose: To assess both the social problems and the responding social policies specific to the guestworker children now living in the Federal Republic of Germany.
Subjects: More than 1,000,000 guestworker children in the Federal Republic of Germany.
Methods: No direct sampling or interviewing of the children is being conducted. This is a social policy analysis employing those methods appropriate for policy analysis.
Duration: June 1976-June 1979.
Cooperating group(s): (1) Max Planck Institut für Bildingsforschung, Berlin, Germany. (2) German American Fulbright Commission, Bonn, Germany.
Publications: (1) Rist, Ray C. ***The guestworker in Germany: The prospects for pluralism.*** New York: Praeger Publishing Company, 1978. (2) Rist, Ray C. On the education of the guestworker children. ***Integrateducation,*** May 1978. (3) Rist, Ray C. The guestworkers in Germany. ***Society,*** May/June 1978. (4) Rist, Ray C. Guestworkers in Germany: The Turkish connection. ***Migration News,*** May 1978.

41-NA-2 CHILDREN'S ALLOWANCES IN WESTERN EUROPE

Investigator(s): Ray C. Rist, Ph.D., Visiting Professor, College of Human Ecology, Cornell University, Ithaca, New York 14853.
Purpose: To explore the social policies and social impacts of children's allowances in select Western European countries.
Methods: A policy analysis will be conducted of the existing data.
Findings: The consistent impact of children's allowances as a cash strategy to support the well-being of children suggests it is a viable social policy option for industrial countries.
Duration: December 1977-January 1979.
Publications: (1) ***Integrateducation,*** May 1978. (2) ***Society,*** July 1978. (3) ***Migration News,*** June 1978.

41-NB-1 THE INFLUENCE OF EDUCATION ON UNFOUNDED BELIEFS AMONG HAUSA PRIMARY, SECONDARY, AND UNIVERSITY STUDENTS IN ZARIA, NIGERIA

Investigator(s): Jack A. Reed, Ph.D., Assistant Dean, Academics; and Associate Professor, Faculty of Education, Ahmadu Bello University, Zaria, Kaduna, Nigeria; and Gwamna Gaura, B.Sc., Assistant Principal, Faculty of Education, Government Secondary School, Giwa, Nigeria.
Purpose: To determine the extent to which Hausa students at three educational levels differ in agreement with the expressed behavior of fictitious persons confronted with unfounded belief situations.
Subjects: 150 subjects of Hausa origin: 25 female and 25 male primary school pupils in Class 6, ages 11 to 15; 25 female and 25 male postprimary school students from Form 5, ages 16 to 20; and 25 female and 25 male university students from Part 3, ages 21 to 30.

Methods: A list of unfounded beliefs was compiled through reference to the literature and interviewing of Hausa people in the Zaria area. The list was validated and reduced to 25 widely held beliefs by further interviews with rural residents and townspeople in the same area. The final list of 25 beliefs was rewritten as situational behavioral items and incorporated into a questionnaire in which respondents were requested to indicate whether they would respond in the same manner as the fictional person in the situation. Stratified random samples of primary school, postprimary school, and university students were administered the questionnaire at their respective schools. Data obtained were analyzed by sex and educational level using a one-way ANOVA, rank correlation, and Kendall's Coefficient of Concordance.
Findings: Males held fewer unfounded beliefs than did females at all educational levels. However, at the university level the difference in number of ascribed beliefs between sexes was not significant. As was expected, the number of beliefs generally decreased as education level increased. It was noted, however, that (1) the mean number of female beliefs rose dramatically in the postprimary years and then fell to a frequency comparable with that of males at the same level of education; (2) the mean number of male beliefs decreased steadily across educational levels, but by a nonsignificant amount; and (3) the number of unfounded beliefs held by males did not decrease significantly as educational level increased. Female responses, however, indicated a sharp decrease as education increased. The relative ranking of unfounded beliefs indicated that both males and females had similar sets of beliefs in the primary years, but, as education increased, the importance attributed to certain beliefs in the set differed between males and females. The relative ranking of beliefs also indicated that both sexes had a significant degree of consistency in the importance attributed to some beliefs throughout their educational experience. In other words, it appears that some beliefs were highly resistant to educational experience.
Duration: November 1976-continuing.

41-NB-2 THE EFFECTS OF LOOKING FOR WORK ON MOTHER-CHILD INTERACTION

Investigator(s): Bonni R. Seegmiller, Ph.D., Associate Professor, Department of Psychology, Hunter College, City University of New York, 695 Park Avenue, Box 1449, New York, New York 10021.
Purpose: To examine differences in mother-child interactions among groups in which the mother worked, did not work and was not seeking employment, or did not work and was seeking employment; to see how mother-child interactions differentially changed across time in the three groups; and to consider differences in mother-child interaction at the time the mother secures employment as a function of the length of time she has been looking.
Subjects: 36 mothers and their children, ages 2 to 5, from intact middle income families.
Methods: The study employed direct observations and ratings of mother-child interaction in the naturalistic environment of the home along with an interview of the mother to assess attitudinal variables. Each mother-child pair was observed twice: once at the beginning of the study, and again, either after the mother found a job or approximately 3 months after the first observation.
Findings: Preliminary results indicate that working mothers appear to be less demanding in interactional settings than were the other mothers.
Duration: September 1976-July 1978.
Cooperating group(s): Foundation for Child Development.

41-NB-3 YOUTH UNEMPLOYMENT PROBLEMS

Investigator(s): Nancy Ferrantella, M.A., Consultant, National Commission on Resources for Youth, 36 West 44th Street, Room 1314, New York, New York 10036.

Purpose: To develop knowledge and information concerning the unemployment problems of youth and the best approaches for dealing with the problems; and to identify model programs dealing with this crisis and to disseminate information about them.

Subjects: Boys and girls, ages 14 to 21, who are eligible in terms of income under the Youth Employment and Demonstration Projects Act – YEDPA (family incomes will not exceed 85% of the lower living standard income). Subjects are economically disadvantaged and may also have learning or emotional disabilities.

Methods: The target group of these studies (conducted by the U.S. Department of Labor) consists of in-school youth. The goal of this research is to provide 24 case studies in 1 year to the Department of Labor that identify and describe model youth employment programs for in-school youth. A model program, in this case, is one that has a demonstrated record of success in achieving its objectives and may serve as an example that can be replicated in other locations. The studies will provide information for improving employment and will provide training opportunities for young people under YEDPA. The studies are concerned particularly with programs that overcome barriers between school and work by more closely linking education, employment, and training institutions; and with programs that facilitate the transition between school and work by exposing young people to the world of work. Each project involves the essential element of youth participation. Every model provides for student decision making, setting up working relationships with adults and peers, servicing a real need, and for a learning component in which experience can be examined and analyzed. Reports include findings on program goals, description, student and staff profiles, outcomes, problems and progress, and specific implementation hints for similar projects. On-site observation, interviews, and evaluations provide information.

Findings: Four models have been identified to date: (1) Project Enterprise Construction Project, (2) Bartram School for Human Services, (3) Westport Community Conservation and Improvement Project, and (4) St. Paul Open School Consumer Service.

Duration: May 1978-April 1979.

Cooperating group(s): U.S. Department of Labor, Employment and Training Administration, Office of Youth Programs.

41-NB-4 MINNESOTA SUMMER YOUTH EMPLOYMENT PROGRAM EVALUATION

Investigator(s): Brian Aldrich, Ph.D., Assistant Professor; and Michael Baizerman, Ph.D., Associate Professor, Center for Youth Development and Research, University of Minnesota, 48 McNeal Hall, St. Paul, Minnesota 55108.

Purpose: To learn about the everyday work world and program world of the Minnesota Summer Youth Employment Program (SYEP) as experienced by the youths, their supervisors, and others, so that the experiences may be used by SYEP staff as partial evaluative data.

Subjects: Approximately 100 youths and about 100 supervisors, friends, and parents chosen from both St. Paul and Balance of State Prime Sponsors. Youths' names were provided by the Prime Sponsors, who chose them to represent a broad range of participants.

Methods: The researchers collected a wide variety of verbal, written, and visual data and conducted a content analysis of these qualitative materials. Face-to-face interviews were conducted with youths, supervisors, and others; some limited observations were done at the work sites. A few youths were asked to keep a journal and to participate in a group meeting about work and the journal. An experimental videotape was made so that one could literally see youths at work. A content analysis was planned and done on clippings about youth and work from Minnesota newspapers.

Duration: June 1977-December 1977.

Cooperating group(s): State of Minnesota, Department of Economic Security.

Publications: (1) Balzerman, M. *et al. Youth and work, Minnesota Summer Youth Employment Program evaluation.* St. Paul: Minnesota Department of Economic Security, December 1977. (2) Brokering, B. Requirements for healthy development of adolescent youth: With examples from a Summer Youth Employment Program (SYEP). St. Paul: University of Minnesota, Center for Youth Development and Research, 1978.

41-NB-5 MATERNAL EMPLOYMENT, SUBSTITUTE CARETAKERS, AND THE SOCIAL BEHAVIOR OF SENEGALESE PRESCHOOL AGE CHILDREN

Investigator(s): Marianne Bloch, Ph.D., Postdoctoral Research Fellow, Section of Comparative Human Development, Laboratory of Human Development, Roy Larsen Hall, Harvard University, Appian Way, Cambridge, Massachusetts 02138.
Purpose: To determine the effect of maternal employment on young children's play and social behavior and interaction with various caretakers in a rural village in Senegal.
Subjects: 31 girls and boys, ages 3 to 5, in Senegal, West Africa.
Methods: The research involved randomized 30-minute behavioral observations of the subjects in their natural environment using a modification of Jane Stallings' SRI Head Start and Day Care Evaluation Observation Instrument. Children of mothers working at seasonal farm labor and children of mothers who stayed at home were observed during the period of seasonal work and during a subsequent 3-month period when all mothers (working and nonworking) were at home. ANOVA with repeated measures analysis was used.
Findings: The principal finding to date appears to be that when the mothers of the sample children are at work, their children spend more time in independent activities and in play activities that are highly involved and learning oriented than do the children of nonworking mothers. No other variables showed effect of work.
Duration: September 1975-December 1978.
Cooperating group(s): University of Michigan, Ann Arbor, Center for Research in Economic Development.
Publications: Information is available from the investigator.

41-NC-1 CHILDREN'S VIEWS OF HITLER: NATIONAL, AGE, AND SEX COMPARISONS

Investigator(s): James J. McRoy, Ph.D., Associate Professor and Chairman, Department of Psychology, Upsala College, East Orange, New Jersey 07019.
Purpose: To reveal the extent and accuracy of children's information about Hitler as an historical figure; and to investigate their attitudes toward him.
Subjects: 2,500 girls and boys, ages 14 to 18, from the United States and the United Kingdom.
Methods: A General Inquirer computer content analysis of thematic material in essays will be conducted. Statistical methods will include trend analysis, canonical analysis, and factor analysis. Appropriate nonparametric tests will be used to assay the reliability of age, sex, and national group differences. A purpose of the research is to put Bossmann's data on German children in a cross-national perspective using similar approaches.
Duration: June 1977-January 1979.
Cooperating group(s): Upsala College Faculty Research Fund.
Publications: Bossmann, D. *Was ich über Adolph Hitler gehört habe.* Fischer-Verlag, 1978.

41-ND-1 AMERICAN SAMOAN FAMILIES IN TRANSITION

Investigator(s): Betty H. Tuck, Ph.D., Project Director, American Samoa Community College, Pago Pago, American Samoa 96799.

Purpose: To examine (in each of the major population centers for Samoans) the experiences of recent Samoan immigrants to the United States; and to examine the experiences of some of the institutions that have contact with them, in order to develop recommendations for Samoa and for federal and local governments.
Subjects: 100 American Samoan families who immigrated to one of five *gateway* cities (Honolulu, Seattle, San Francisco, Los Angeles, or San Diego) within the last 24 months. Expanded family groups were included in the sample.
Methods: An informal interview technique, based on a questionnaire designed with the Samoan community, was used to collect data from Samoan subjects. Samoan and Palangi interviewers queried institutions which had contact with the immigrants.
Duration: October 1977-September 1980.
Cooperating group(s): (1) Region IX Study of Services to Samoans, U.S. Department of Health, Education, and Welfare. (2) ASIASN, Inc., San Francisco. (3) University of Hawaii, School of Social Work. (4) Office of Samoan Affairs. (5) Governor's Office, California. (6) Governor's Office, Washington. (7) Governor's Office, Hawaii. (8) Governor's Office, Pago Pago.
Publications: Interim reports (June 1978, 1979, and 1980) are or will be available from the Governors' offices.

41-NE-1 THE IMPACT OF EXTENDED FAMILY VARIABLES UPON THE UPWARD MOBILITY OF BLACK FAMILIES

Investigator(s): Harriette Pipes McAdoo, Ph.D., Principal Investigator, Family Research Project, 201 Wilde Lake Village Green, Columbia, Maryland 21044.
Purpose: To investigate the impact that defined family factors, demography, and socioeconomic status of family have upon educational and occupational mobility in black families. (Family factors are defined as the family interaction network, the kin help systems, reciprocal obligations, and socialization pattern practices found in nuclear and extended family structures.)
Subjects: 87 urban and 90 suburban families: 174 mothers and 131 fathers representing 178 family units. All parents were over age 25, black, presently of middle income status, and parents of school age children under 18. Family structure forms were nuclear (93%), extended (6%), and augmented (2%), including two-parent units (72%) and one-parent units (28%). The mean income was $20,500 for males; $12,500 for females.
Methods: Subjects were interviewed by examiners of the same sex, race, and socioeconomic status. Questions concerned family relationships, values, attitudes, satisfaction, use of social agencies, and family concerns. Geographic, economic mobility, and changes in the number of children were examined over three generations.
Findings: The kin help system was maintained before, during, and after mobility. Four mobility patterns over three generations were found: (1) newly middle class from two generations of working class (62%); (2) had lower class grandparents, working class parents, and had become middle class (23%); (3) had parents who were born working class and had moved to middle class (6%); and (4) had been middle class for three generations (9%). Parents did not cut themselves off from their families to become upwardly mobile. Some families (80%) indicated an extensive involvement in the kin exchange system, with the family giving more help than friends or community agencies. Child care, financial, and emotional support were the areas of help both given to and received from kin, and the majority appreciated this help. No differences were found between urban and suburban sites. No differences in kin help were found between those born middle class or working class, nor among the four mobility patterns. The families valued higher education; religion played an important role in the lives of half the subjects; and their level of satisfaction with their physical and social environments was positive. When crises occurred, the preference was to handle it within the family. Utilization of social service agencies was low because of the cultural preference for kin help and because they felt agencies were insensitive to their unique needs. They indicated need for personal and marital counseling, support of their children, and help with

financial planning. Urban families were concerned about schools, day care, and medical service. These services were available for suburban families but were too expensive, and they indicated transportation problems and wanted job placement assistance. These upwardly mobile families maintained their cultural pattern of relying upon the extended kin-help exchange, while maintaining their nuclear structural domestic unit. These findings would support the contention that the extended help patterns are culturally rather than solely economically based and should be considered in the development and implementation of any family support programs.
Duration: 1976-completed.
Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

41-NF-1 THE DEVELOPMENT AND IMPLEMENTATION OF A RACIAL PREJUDICE SCALE

Investigator(s): Thomas C. Denne, M.S.Ed., Graduate Student, Department of Psychology, Oglebay Hall, West Virginia University, Morgantown, West Virginia 26506; and J. William Moore, Ed.D., Chairman; and William E. Hauck, Ph.D., Associate Professor, Department of Education, Bucknell University, Lewisburg, Pennsylvania 17837.
Purpose: To develop a multifaceted (several subscales) racial prejudice scale to use in school settings; and to use the scale to assess racial prejudice in an integrated school system.
Subjects: 307 white and 93 black children (224 boys and 176 girls) in grades 6, 8, 9, and 10.
Methods: The methodology included descriptive study; correlations to determine relationships among various subscales and total index of prejudice; analyses of variance to determine effects of sex, race, grade, and amount of interracial contact to the various measures (subscales and total index) of prejudice; and correlations to determine relationships of prejudice to several personality variables.
Findings: There were highly significant ($p < .00001$) relationships among subscales, yet in no case was more than 25% of variance accounted for (evidence for prejudice as situation specific construct). On nearly all prejudice scales, blacks were less prejudiced than whites, and girls were less prejudiced than boys. For white students, prejudice increased with more prolonged and intimate interracial contact. There were low but significant intercorrelations for prejudice and personality variables.
Duration: March 1975-completed.

41-NG-1 CHILD DEVELOPMENT INFORMATION UTILIZATION BY RESERVATION AND URBAN INDIAN PARENTS OF VERY YOUNG CHILDREN

Investigator(s): Dorothy L. Miller, Principal Investigator, Native American Resource and Research Association, 9215 Wakefield Avenue, Panorama City, California 91402.
Purpose: To determine child development norms for rural and urban Indians.
Subjects: 50 reservation and 50 urban Native American families with children under age 5.
Methods: Mothers were interviewed by trained Native American interviewers. Indian mothers' socioeconomic and parenting status, child development concepts and practices, and their source of information about their child's development will form independent, intervening, and dependent variables. Type and utilization of child development information will be related to socioeconomic and family structure of each Indian mother, comparing urban and reservation data.
Duration: October 1977-September 1978.
Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

41-NG-2 AN INVESTIGATION OF PUPIL ATTRIBUTION

Investigator(s): James H. McMillan, Ph.D., Assistant Professor, Department of Educational Psychology; and Mark Clarke, Ph.D., Assistant Professor, Multi-Cultural and Bilingual Education, School of Education, University of Colorado, 1100 - 14th Street, Denver, Colorado 80202.
Purpose: To determine racial differences among pupils with respect to the value they place on effort, ability, and outcome factors in a situation.
Subjects: 200 girls and boys, ages 10 to 12; approximately one-third Anglo, one-third Black, and one-third Chicano.
Methods: Subjects allocated rewards or punishment to children described in stories in which the ability to do tasks, effort, and situation outcome varied. Counterbalanced presentation of 16 stories took one-half hour per group. A 2 x 2 x 2 x 3 analysis of variance was used for data analysis.
Duration: May 1978-June 1978.
Cooperating group(s): Denver Public Schools.

41-NG-3 PSYCHOLOGICAL STUDIES OF MINORITY MENTAL HEALTH

Investigator(s): Sheldon J. Korchin, Ph.D., Professor; Enrico E. Jones, Ph.D., Assistant Professor; and Don Q. Griffin, M.A., Graduate Student, Department of Psychology, University of California, Berkeley, California 94720.
Purpose: To investigate, in many realms, the important factors related to understanding and helping people of minorities; specifically, to study the sources of competence in black, male adolescents.
Subjects: Screening sample: 800 black males, ages 19 to 21, enrolled in junior colleges in the Bay Area. 60 subjects in the sample and their parents are being studied intensively: 30 are identified as particularly competent (in terms of personality); and 30 are of average ability.
Methods: To identify the nature and sources of personality competence, 30 competent and 30 average black, male adolescents are being selected by self-ratings on a Q-sort criterion of competence, earlier developed, and by teacher ratings on the same instrument. The two contrasting groups are being studied more intensively. In addition to self- and teacher Q-sorts, each student completes a Biographical and Attitudinal Self-Report Questionnaire, the vocabulary subtest of the Wechsler, and a measure of internal-external locus of control. In the second phase, each boy's family is interviewed and tested, their childrearing attitudes are explored, and the home environment is rated on an environmental Q-sort. Analyses are in progress to discover the personality qualities of the youths identified as competent, the relations between the concepts of competence held by teachers and students, and the conditions in the family environment that may account for the competence differences.
Findings: In a preliminary study, it was found that the self-concepts (and other test measures) of competent youths did not differ importantly from those of average youths. However, there were significant differences: competent black teenagers came from more stable homes (less divorce, less moving, etc.), were earlier involved in productive work, and were more exposed to the majority culture.
Duration: 1975-1980.
Cooperating group(s): National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-NG-4 EXTENDED FAMILY STRUCTURE AND SYSTEM IN HISPANIC POPULATIONS

Investigator(s): Jaime Sena-Rivera, Ph.D., Assistant Professor, Department of Sociology and Anthropology, University of Notre Dame, Notre Dame, Indiana 46556.

Purpose: To investigate the contribution of the structure and system in Hispanic populations to the social psychological well-being of individual family members; and to study the socialization practices of Hispanic dependent children.

Subjects: Case studies of Hispanic populations of living great-grandparents, sets of married sons and daughters (themselves grandparents), and sets of married sons and daughters of these grandparents (themselves parents).

Methods: Initially, case studies of extended Hispanic families were collected in the United States and Mexico. Survey research is being conducted in collaboration with the Survey Research Institute, University of Michigan, Ann Arbor; survey research testing of case study findings is being carried out in Detroit, Michigan; and some items have been transferred to a national survey research study of a United States population of Mexican descent.

Findings: Preliminary results reveal cultural (generational) transmission of extended familialism with adaptive mechanizations suitable for urban-industrial coping styles, all of which may be defended (hypothesized) as positive. Practices are predictable at least into the next century.

Duration: 1971-1981.

Cooperating group(s): (1) National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare. (2) San Jose State University, California. (3) University of Michigan, Ann Arbor, Survey Research Institute. (4) Colegio de Mexico, Mexico City.

Publications: (1) A monograph: La familia Chicana: A tri-generational study of four Mexican-descent extended families in the Michigan-Indiana-Illinois region. Notre Dame, Indiana: University of Notre Dame Press (in press). (2) Extended kinship in the United States: Competing models and the case of ***La Familia Chicana. Journal of Marriage and the Family,*** 1978.

EDUCATIONAL FACTORS AND SERVICES

General Education

41-OA-1 DIALOGUE PEDAGOGY IN PRESCHOOL

Investigator(s): Gunni Kärrby, Ph.D., Assistant Professor; and Björn Flising, B.A.; and Göran Lassbo, B.A., Research Assistants, Department of Educational Research, University of Göteborg, Fack, S-43120 Mölndal, Sweden.

Purpose: To determine, in response to the current trend toward the dialogue method of teaching, how the concept of dialogue pedagogy is experienced and put into practice by preschool personnel.

Subjects: Approximately 45 preschool teachers and nurses working with children, ages 1 to 7, from three full- and part-time day care centers in Sweden.

Methods: Data were collected by group interviews and observation. Open interviews were made in small discussion groups of four to six persons. Each person attended a discussion group five to ten times. Teaching situations were analyzed related to initiative, awareness of the child's needs, degree of steering, the teacher's purpose, and involvement of teacher's feelings. The discussions were recorded and analyzed.

Findings: There was, generally, a positive attitude toward the dialogue method. Some preschool personnel rejected the method as being too individualistic and teacher-pupil centered. In trying to apply the method, most personnel experienced difficulties finding enough time for each child. Contact with the parents was considered important.

Duration: July 1975-June 1978.

Publications: Information is available from Dr. Kärrby.

41-OA-2 EVALUATION OF THE FIELD TEST OF PROJECT INFORMATION PACKAGES

Investigator(s): Marian S. Stearns, Ph.D., Psychologist, Education Research Department, Stanford Research Institute, 333 Ravenswood Avenue, Menlo Park, California 94025; and Donald P. Horst, Ph.D., Program Director, RMC Research Corporation, Suite 400, 2570 West El Camino Road, Mountain View, California 94040.

Purpose: To assess the viability of Project Information Packages (PIPs) as a method of disseminating exemplary compensatory reading and mathematics education programs for kindergarten through 12th grade.

Subjects: Approximately 1,550 students were chosen from 17 school districts. The subjects were divided into six programs: (1) 500 first graders, (2) 40 per grade level of grades kindergarten through 6, (3) 20 per grade level of grades kindergarten through 6, (4) 135 third and fourth graders, (5) 300 eighth graders, and (6) 200 seventh through ninth graders.

Methods: Project Information Packages are complete management information and "how to" kits to enable staff in school districts to replicate a reading and/or math project previously proven successful in a similar school district. Six exemplary projects were analyzed by the RMC Research Corporation and found to be effective and potentially replicable, and six PIPs were developed based on them. PIPs are evaluated to determine if school district staff can implement the original exemplary program through use of the information packet, and to determine if replication of the projects will produce achievement gains as good as those demonstrated by original exemplary projects described in the packages. To evaluate the use and effectiveness of the PIPs, attitude questionnaires were administered to administrators and project and nonproject teachers; open-ended informal interviews were held with directors and instructional staff; and specified PIP

elements were observed in instructional situations. The Metropolitan Achievement Test, Crandall's IAR Attitude Inventory, and tests for intellectual achievement and responsibility were given to students in the programs. During the year of implementation of programs, frequent visits were made by field staff who were specialized on each PIP, and tests were administered to the students in October and April.

Findings: The results of the first year study, reported in Stearns (1976), were generally favorable. Projects were implemented to the degree of specificity required by the PIPs, and this was done with relatively minor technical assistance. Student attitudes were not adversely impacted by project participation, and most project staff were enthusiastic. However, there was little evidence that the PIP projects raised reading scores on the Metropolitan Achievement Test (1970) to the extent it was expected the original projects would have. There seemed to be no reason why this result would not recur in the second year. Consequently, some special studies were conducted of the analytic foundations of the PIP criterion of success. During the second year of the study, the PIPs were examined to identify the instructional style that was specified. It was found that very little information was provided on the projects' philosophy of learning and instructional practices for teaching children. It is fair to say that, overall, the packages described project installation primarily from a Project Director's point of view; they did not describe instruction from the point of view of a teacher who had never implemented the project. Therefore, it was determined to analyze the curriculum materials which were used in the projects for their relevance to MAT Reading. It was found that projects using a given PIP did not use the same teaching materials, that the materials used were not very different from the regular classroom materials, and that project materials generally were not especially relevant to reading comprehension tested by the MAT. (At the 1st and 2nd grades, content of the curriculum materials and the MAT Reading subtest corresponded somewhat more closely.) In summary, it would be surprising if the projects, however well implemented, showed remarkable gains on MAT Reading. And since the PIP curriculum was not very different from the regular curriculum, what gains were observed might not be due to the PIP project. A brief examination of the tests used to validate the originating projects showed that the original tests were generally more suited to the curricula. The investigation of the properties of the statistical procedure as applied to the MAT yielded some interesting formal results, as well as a better understanding of the implications of accepting the MAT norms as longitudinally valid. It was concluded that the assumption that the MAT norms are longitudinally valid should not be uncritically accepted. Assuming that the MAT norms are longitudinally valid has implications about the growth of Reading achievement which have not yet been independently verified. For example, as measured by the MAT, Reading in children at the 90th percentile in the 2nd grade is growing almost six times faster than is Reading in 8th grade children at the same percentile; Reading in 2nd graders at the 10th percentile is growing only 1.5 times faster. If this is true, it is certainly an interesting fact for developmental psychologists to explain. On the other hand, this interaction of learning rate, grade, and percentile may just be an artifact of the MAT scaling process. Based on the special studies, it was concluded that the PIP replication principle was not sound: there was little reason to expect that projects which correctly rendered the PIPs would dramatically increase MAT-type reading scores. Analysis of MAT achievement test results confirmed the expectation that the Reading scores would not dramatically change. Norm referenced analyses showed that Reading scores were not (educationally) significantly greater than expected. The projects did generally maintain at least the growth predicted from the norm tables. However, since the growth predicted from the norm tables is generally an underestimate of expected growth, given that the pre- and posttests are not perfectly reliable, achieving more than the expectation calculated from the norm tables is not as impressive as it at first seems. Bivariate regression equations were fit to the pre- and posttest scores, using dummy variables to encode the effect of well-implemented teachers. It was not found that being in a well-implemented class was systematically related to gains larger than the gains in poorly- or moderately well-implemented classes.

Duration: July 1974-completed.

Cooperating group(s): Office of Planning, Budgeting, and Evaluation; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare.
Publications: Copies of the final report (Volumes I and II) are available from: Dr. Ann Bezdek, Office of Planning, Budgeting, and Evaluation, Room 3051, U.S. Office of Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202.

41-OA-3 MODEL MULTICULTURAL RESOURCE COLLECTION

Investigator(s): Joanna Fountain Chambers, M.L.S., Bilingual Resource Specialist, Education Service Center, Region XIII, Program Development Division, Bilingual Resource Center, 7703 North Lamar Boulevard, Austin, Texas 78752.
Purpose: To assess the interest, appropriateness, durability, accuracy, and general appeal of materials selected to strengthen and reinforce classroom and library collections in the areas of cultural understanding, dual language stories, and Spanish language products.
Subjects: School children, teachers, librarians, and student teachers in numerous schools in Texas.
Methods: Subjects participated by reading, listening, and viewing selected books, cassettes, and filmstrips, etc.
Findings: There have been very positive reactions across the board, primarily to materials in the multimedia formats; e.g., book and cassette; filmstrip and cassette; and book, filmstrip, cassette.
Duration: Summer 1977-Summer 1978.
Cooperating group(s): (1) St. Edwards University. (2) Southwest Texas State University. (3) Elementary schools in Austin, Waelder, Georgetown, Presidio, Odessa, and Hereford, Texas.
Publications: ***Hey, Miss! You got a book for ME? Annotated bibliography*** (April 1978) is available free from the Dissemination and Assessment Center for Bilingual Education, Austin, Texas. (Second edition, Summer 1978, is available at cost.)

41-OA-4 PARTICIPATORY DEMOCRACY IN PUBLIC SCHOOLS

Investigator(s): Woodrow W. Clark, Jr., Ph.D., Research Anthropologist, Institute for Study of Social Change; and S. Walker, Ph.D., Assistant Professor, Department of Education, University of California, Berkeley, California 94720.
Purpose: To use anthropological methods to study school site governance structures, especially as they involve teachers, parents, and students in equal decision making power and authority.
Subjects: Males and females of all ages: teachers, parents, and students from one school community.
Methods: Ethnographic techniques are used through symbolic interactionism. The focus is on schools that already have operating school governance structures.
Duration: 1975-1981.
Cooperating group(s): National Institute of Education; Education Division; U.S. Department of Health, Education, and Welfare.
Publications: (1) Clark, Jr., W.W. ***Teacher participation in school site governance.*** Chicago: Center for New Schools. (2) Crockenberg, V. and Clark, Jr., W.W. ***Teacher control of schools*** (unpublished). (3) Clark, Jr., W.W. ***Public school violence.*** San Francisco: Social Problems Press, 1978.

41-OA-5 ATTITUDES OF PRINCIPALS TOWARD EARLY CHILDHOOD TEACHERS

Investigator(s): Kelvin L. Seifert, Ph.D., Assistant Professor, Department of Educational Psychology, Faculty of Education, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2.
Purpose: To study the knowledge and attitudes of elementary school principals about the teaching of young children.

Subjects: 60 elementary school principals from Manitoba. Approximately half came from the Winnipeg metropolitan area; half, from rural Manitoba (100-mile radius of Winnipeg).
Methods: Each principal was interviewed for 30 to 60 minutes. Six to eight predetermined questions were asked in each interview, but principals were encouraged to elaborate on each question. Questions concerned (1) personal qualities of early childhood teachers, (2) their presumed motives for teaching, (3) the skills that principals believed early childhood teachers need to teach young children, and (4) the importance and desirability of attracting men to this branch of teaching. Results were analyzed for their content, and revisions of questions and procedures are being made. Several common themes have already been identified informally.
Findings: Principals often express feelings of isolation from teachers, and most especially, from early childhood teachers. They tend to describe early childhood teaching in very stereotyped *motherhood* terms. Principals support the entry of men into the field but express serious doubts as to whether such men can actually be found.
Duration: Fall 1977-continuing.
Cooperating group(s): University of Manitoba Research Board.

41-OA-6 A NATURALISTIC PROCEDURE FOR THE ASSESSMENT OF EARLY EDUCATION PROGRAMS

Investigator(s): David E. Day, Ed.D., Associate Professor; and Elizabeth Perkins, M.A., Doctoral Student, School of Education, University of Massachusetts, Amherst, Massachusetts 01003.
Purpose: To develop a procedure for evaluating early childhood education programs in which practitioners collaborate with evaluators in producing data useful in program development.
Subjects: Group and family day care centers, nursery schools, special needs programs, Head Start programs, and private kindergartens serving children, ages 2:9 to 6.
Methods: A quasiclinical research methodology was used. Observational data of children in the natural setting were collected using a behavior checklist developed by the investigators. Data were organized on a behavior-activity/area matrix (behavior map). Time series analysis was used for testing the effect of changes in the environment over time. The procedure was developed with a group of inservice teachers, after which the procedure and instruments were subjected to tests for reliability and validity.
Duration: September 1977-December 1978.
Publications: Three papers describing the procedures and validation processes are available from the investigators.

41-OA-7 A COMPARATIVE STUDY OF FORMAL AND INFORMAL PRESCHOOL PROGRAMS: PHASE II, 1977-1980

Investigator(s): Joseph T. Lawton, Ph.D., Assistant Professor; and Frank H. Hooper, Ph.D., Professor, Child and Family Studies, School of Family Resources and Consumer Sciences, University of Wisconsin, Madison, Wisconsin 53706.
Purpose: To investigate the effects of formal and informal preschool programs on young children's cognitive and social development and acquisition of competencies.
Subjects: 60 girls and boys, ages 2½ to 3½, of mixed ethnic-socioeconomic status. The children are participants in (a) a formal (Ausubelian), (b) an informal (Piagetian), and (c) an informal (traditional) preschool program.
Methods: The investigation is longitudinal over 3 years. Groups (a) and (b) are contrast groups in the University of Wisconsin Preschool Laboratory; group (c) is a control group in a community preschool. The children are tested at entry to the programs and posttested at the end of a year and at the beginning and end of the 2nd and 3rd years. Pre- and posttesting consist of the Peabody Picture Vocabulary Test; Raven's Progressive Matrices; and Piagetian tests of class, relations, con-

servation, etc. The tests will be revised if necessary. Interim tasks administered halfway during the 1st year of the study consisted of two forms of classification tasks (dichotomous sort, some-all, and class-inclusion) and conservation tasks (continuous and discontinuous conservation of area).
Findings: The Ausubelian program resulted in improved children's performance on both classification and conservation tasks compared to children in the Piagetian program. Data indicated a nonsynchronous development of classification and conservation operations. Both groups of children found classification tasks easier to deal with than tasks on conservation.
Duration: Fall 1977-Summer 1980.
Cooperating group(s): (1) National Institute of Education; Education Division; U.S. Department of Health, Education, and Welfare. (2) University of Wisconsin, Graduate School.

41-OA-8 A STUDY OF FULL-DAY KINDERGARTEN PROGRAMS AS COMPARED TO THE STATE-SUPPORTED HALF-DAY PROGRAM

Investigator(s): Mary M. Sandifer, Ph.D., Director, Consulting Resources, 242 Tram Road, Columbia, South Carolina 29210; and Garrett K. Mandeville, Ph.D., Professor; Joseph P. Ryan, Ph.D., Associate Professor; Frances S. O'Tuel, Ed.D., Associate Professor; and Kevin Swick, Ed.D., Associate Professor, College of Education, University of South Carolina, Columbia, South Carolina 29208.
Purpose: To compare readiness levels of students in full-day and half-day kindergartens; to determine reasons why parents do or do not send their children to kindergarten; and to compare the costs of half-day and full-day kindergartens.
Subjects: Approximately 400 parents of 1st graders selected from 40 South Carolina elementary schools were surveyed about their reasons for sending or not sending children to kindergarten. Approximately 400 kindergartners (about half from full-day and half from half-day kindergarten programs) were selected at random from the same schools from which the parent sample was drawn, and the children were tested to compare performance in the two programs.
Methods: In gathering this information, which will be used in planning future kindergarten programs and in making recommendations to the state legislature for the funding of kindergarten programs, it was hypothesized that students from the lowest income levels would have the lowest readiness levels, and that they would also be the ones most likely to be deprived of kindergartens. This investigation consisted of (1) a telephone survey of parents, (2) a testing program of children in the two types of kindergarten programs, and (3) a study of financial data on the cost of running full-day and half-day kindergarten programs. Telephone interviewers were trained by the principal investigator in procedures and techniques of nondirective questioning. The tests used to measure the readiness of the kindergartners' gross and fine motor coordination, language development, and social awareness included the Inventory of Readiness Skills, the Peabody Picture Vocabulary Test, the Illinois Test of Psycholinguistic Abilities, and the Circus B Test. To assess cost effectiveness, the two types of programs will be compared on a per pupil basis.
Duration: April 1978-August 1978.
Cooperating group(s): (1) South Carolina State Department of Education, School Services Section. (2) Eight cooperating South Carolina school districts and 37 South Carolina elementary schools.

41-OB-1 COUNSELORS' AWARENESS OF NONVERBAL BEHAVIORS OF CHILDREN

Investigator(s): Diane E. Frey, Ph.D., Associate Professor, Department of Psychology, Wright State University, 374-F Millet Hall, Colonel Glenn Highway, Dayton, Ohio 45431.
Purpose: To assess counselors' awareness of children's nonverbal behavior.
Subjects: Graduate students in counseling and one girl, age 6.

Methods: Counselors-in-training were videotaped during a counseling session with a 6-year-old girl. Following the session, each counselor viewed the tape and completed a questionnaire about nonverbal behaviors. Questionnaires were analyzed using content analysis.
Findings: Counselors' awareness of nonverbal behaviors is limited, although their modality of communication accounts for 65% of the interaction in communication. What awareness was found was manifested only in the kinetics area.
Duration: Fall 1977-completed.

41-08-2 EFFECTS OF A CAREER DEVELOPMENT PROGRAM ON MIDDLE SCHOOL CHILDREN

Investigator(s): Doris B. Matthews, Ph.D., Associate Professor, Department of Education, South Carolina State College, P.O. Box 1715, Orangeburg, South Carolina 29117; and Frances S. O'Tuel, Ph.D., Associate Professor, College of Education, University of South Carolina, Columbia, South Carolina 29208.
Purpose: To investigate the difference in scores on the Career Maturity Inventory (CMI) between middle school students in a planned program of career development and those who did not receive treatment; and to explore sex differences and the relationships between CMI and IQ and achievement, and the change of grade level.
Subjects: 69 experimental and 66 control subjects – all students (predominantly black middle class) in a middle school: 46 sixth graders (25 experimental, 21 controls); 49 seventh graders (23 experimental, 26 control), and 40 eighth graders (21 experimental, 19 control). There were more males in the control group and more females in the experimental group.
Methods: The design was a prepost for some questions and an experimental-control design for others. All 6th, 7th, and 8th graders were pretested with the CMI, which was the dependent variable. By random assignment, half of the students were assigned to the treatment group, and half were assigned to a control group for one semester. Students in the treatment group viewed videotapes in the "Bread and Butterflies Program" and participated for two 50-minute periods a week in follow-up activities outlined in the Teachers Manual. All students were posttested at the end of the semester. Information on each subject included group, grade, sex, IQ, and scores on six subscales of CMI, Stanford Achievement Test, and the Kuhlman-Anderson Test of General Aptitude. Data were analyzed by total, by grade, by sex, and by control/experimental.
Findings: There were no significant differences between experimental and control groups on pretest measures. On the posttests, there were significant differences on self-appraisal, occupational information, and goal selection; the experimental means were higher for these and the other subscales of the CMI, but only these reached significance. There were no significant differences between boys and girls in the treatment group on prepost differences of attitude, occupational information, goal selection, and planning. There were significant differences on self-appraisal and problem solving. In each case, boys changed more and their mean pretest score was lower. Posttests were approximately the same for self-appraised and were higher for males on problem solving. All subtest scores (pre and post) were positively correlated with IQ except problem solving. With the exception of the problem solving posttest of the Stanford Reading Comprehension Subscale, all other correlations between achievement and CMI were positive and significant. The mean difference between pre- and posttest was not greater, as expected, for each successive grade. Means were higher for each successive grade, but prepost differences, in general, were greater in the 7th grade than in 6th or 8th grades.
Duration: January 1978-October 1978.
Cooperating group(s): South Carolina State College, Felton Laboratory School.
Publications: (1) ***Explorations in Education,*** Spring 1978, 15. (South Carolina State College). (2) Information is available from the investigators.

41-OC-1 CHILD CARE WORKERS' ATTRIBUTIONS TO VARIED REPRIMANDS' EFFECTIVENESS

Investigator(s): James C. Mancuso, Ph.D., Professor, Department of Psychology, State University of New York, Albany, New York 12222; and Kenneth Handin, M.A., Psychologist, Saint Catherine's Child Care Center, Albany, New York.

Purpose: To demonstrate that child care workers have implicit theories about the ways in which reprimands affect the behaviors of a reprimanded transgressor.

Subjects: 51 professional workers, ages 22 to 35, involved in day-to-day care and keeping of children with special problems.

Methods: Workers observed films of one of three different types of reprimand (retributive, restitutive, explanatory) that had been delivered to a boy who had broken a vase while he engaged in somewhat thoughtless play. The workers then indicated, by responding to a series of 7-point scales, their views of the reprimand's effectiveness. All three films were then shown to the workers and they cross-compared the reprimand methods on a series of questions.

Findings: Workers almost unanimously endorse the restitutive reprimand, which is seen as being both not too severe and not too lenient. Workers see themselves as differentiated from most parents, who would use retribution. Only high peer rated workers endorse explanation.

Duration: September 1976-completed.

Cooperating group(s): (1) Saint Anne's Home, Albany, New York. (2) Astor Home, Rhinebeck, New York.

Publications: Information is available from the investigators.

41-OD-1 THE ROLE OF INTERSCHOOL SPORTS IN SECONDARY SCHOOLS OF ONTARIO

Investigator(s): Dick Moriarty, Ph.D., Director, Sport Institute for Research/Change Agent Research; and Gord Olafson, Ph.D., Graduate Coordinator, Faculty of Human Kinetics; J. Alex Murray, Ph.D., Director, Canadian-American Institute and the Internation Business Study Research Unit, Faculty of Business Administration; and Marge Holman-Prpich, M.Ed., Director of Sports, University of Windsor, Windsor, Ontario, Canada N9B 3P4.

Purpose: To assess the role of interschool activities in the academic and athletic development of high school students; and to assess the role of Board of Education members, administrators, coaches, and the attitude of the general public toward secondary school sports.

Subjects: Samples were selected from a population of 32,000 students, 2,000 teachers (including 300 coaches), 51 elected board members, and 34 appointed parents and fans associated with 34 schools and 3 regional associations in southwestern Ontario: (1) 100 semidirected, focused, audio interviews represented samples of the population; (2) 200 verbal opinionnaires; (3) 1,300 written opinionnaires including 15 principals, 11 department heads, 103 teachers/coaches, 966 students and/or players (25% samples from boys' and girls' teams for volleyball, basketball, gymnastics, track and field, tennis, and swimming and from boys' football, hockey, and wrestling), and 105 fans/parents; (4) 55 sporting events in each of the sports listed above were monitored by either media or personal observation teams to assess actual behavior which was subsequently compared with avowed goals expressed on audio and written interviews and opinionnaires; and (5) 4,000 Canadians were interviewed regarding their attitudes toward secondary school sports.

Methods: Each of the above samples was either a quota sample reflective of the various populations or a weighted sample reflecting the populations from which they were selected. The study, conducted on the Sport Institute for Research/Change Agent Research assistance analysis model, consisted of three phases: (1) Organization Audit and Communication Feedback, (2) Participative Clinics (to develop ability of change agents to initiate change), and (3) an Organization Re-audit.

Findings: There is a distinct difference between the goals and means of secondary school sports as compared with amateur athletics. The avowed goals and actual behavior of the Southwestern Ontario Secondary School Athletic Association in particular, and the Ontario Federation of

School Athletics Association in general, are parallel. Coaching has a short-term negative effect upon classroom teaching (which is compensated for in intermediate and long-range evaluation). The overwhelming majority of the Canadian public (95% approximately) favors mass participation in school and amateur sports and opposes elite sport athletics.
Duration: September 1976-September 1978.
Cooperating group(s): Ontario Ministry of Education, Research and Evaluation Branch.
Publications: Moriarty, D. and Holman-Prpich, M. ***The role of interschool sport in the secondary school of Ontario.*** Toronto, Ontario: Ontario Ministry of Education, 1978.

41-OE-1 MINNESOTA PRESCHOOL INVENTORY: PREDICTION OF KINDERGARTEN PERFORMANCE

Investigator(s): Harold Ireton, Ph.D., Associate Professor, Department of Family Practice and Community Health, University of Minnesota, A290 Mayo Memorial Building, Box 381, 420 Delaware Street, S.E., Minneapolis, Minnesota 55455.
Purpose: To develop an instrument to identify children with potential academic learning problems; and to determine the relationship of mothers' prekindergarten reports of children's development, adjustment, and symptoms to subsequent performance in kindergarten.
Subjects: 360 white children, ages 4½ to 5½, participating in the annual kindergarten roundup in Bloomington, Minnesota.
Methods: The Minnesota Preschool Inventory (MPI) consists of 170 statements describing behaviors of children relating to development (motor, language, academic, self-help), to adjustment (immaturity, hyperactivity, behavior problems, emotional problems), and to symptoms (motor, language, somatic, sensory). Mothers completed the inventory at the beginning of kindergarten. Teachers rated children's performance in kindergarten at the end of the year.
Findings: The MPI developmental scales correlated well with the children's kindergarten performance. The adjustment scales and individual symptom items did not correlate overall with kindergarten performance but were useful for identification of children with special problems. Of 20 children rated as the poorest students by their teachers, the MPI successfully identified 75%.
Duration: September 1975-June 1978.
Publications: A copy of the ***Minnesota Preschool Inventory Manual*** (1978) is available from Behavior Science Systems, P.O. Box 1108, Minneapolis, Minnesota 55440.

41-OF-1 PARENTAL KNOWLEDGE OF CHILD DEVELOPMENT AND THE RELATIONSHIP TO SCHOOL ACHIEVEMENT AND ADJUSTMENT OF CHILDREN IN RURAL AND URBAN PUNJAB

Investigator(s): Manjeet B. Singh, Ph.D., Professor and Head, Department of Child Development, College of Home Science, Punjab Agricultural University, Ludhiana, Punjab, India.
Purpose: To determine the relationship between parental knowledge of child development and children's adjustment to and achievement in school in rural and urban areas of the Indian State of Punjab.
Subjects: Young, middle-age, and older parents of preschool and elementary school age children in rural and urban areas of Punjab.
Methods: Data are collected by questionnaires supplemented with interviews. A scale to measure knowledge of different aspects of child development was developed by the project. An adjustment inventory will be used to assess adjustment to school. School achievement will be determined with school records and IQ test scores.
Duration: January 1978-January 1982.
Cooperating group(s): Indian Council of Agricultural Research, New Delhi, India.

Publications: (1) Frustration reaction among school age children. ***Indian Journal of Home Science,*** 1977, 10. (2) Sex knowledge of college girls. ***Indian Journal of Home Science,*** 1977, 2. (3) Dramatic play for cognitive development. ***Indian Journal of Home Science,*** 1976, 10. (4) The need for parent education. ***Indian Journal of Home Science,*** 1976, 10.

41-OF-2 THE STUDENT ACHIEVEMENT DIAGNOSTIC QUESTIONNAIRE (SADQ)

Investigator(s): Kenneth M. Matthews, Ed.D.; and Carvin L. Brown, Ed.D., Assistant Professors of Educational Administration, Bureau of Educational Studies and Field Services, G-10 Aderhold Hall, University of Georgia, Athens, Georgia 30602.
Purpose: To provide educators with a quantitative basis for identifying deficiencies that enable them to develop prescriptive strategies focusing on those factors that affect student achievement.
Subjects: 2,304 Georgia public school students in grades 4 through 12.
Methods: Based on a review of literature, the SADQ provides measures of four factors influencing student achievement which educators can affect directly. The SADQ is designed to measure students' self-concepts of ability, attitudes toward teachers, perceptions of the value teachers place on schooling, and perceptions of the future utility of schooling. The questionnaire uses an Osgood semantic differential format and produces odd-even reliability estimates ranging from .8066 to .9363.
Findings: There is strong evidence that individual teachers have direct and differing influences on each of the four variables measured by the SADQ.
Duration: 1976-continuing.
Cooperating group(s): Sponsoring public school systems.
Publications: Matthews, K.M. and Brown, C.L. Schooling and learning – The principals' influence on student achievement. ***NASSP Bulletin,*** October 1976, 60(402), 1-15.

41-OF-3 TELEVISION VIEWING AND EARLY SCHOOL ACHIEVEMENT

Investigator(s): Jan C. Perney, Ed.D., Professor, National College of Education, 2840 Sheridan Road, Evanston, Illinois 60201; Janet Freund, M.Ed., Coordinator, Pupil Personnel Services and Special Education, School District #111, 240 Prairie Avenue, Highwood, Illinois 60040; and Alicerose Barman, M.A., Consultant, School District #108, 929 Edgewood Road, Highland Park, Illinois 60035.
Purpose: To examine the relationship between television viewing and early school achievement.
Subjects: 202 kindergartners (115 boys and 87 girls); and their parents from two suburban school districts north of Chicago.
Methods: The Kindergarten Task Inventory and the Stanford Early School Achievement Test were used to measure the children's abilities. A questionnaire was constructed for the parents to indicate the child's television viewing habits and conditions under which the viewing was done. The reliabilities for the standardized tests ranged from .80 to .89. Correlational analysis was used to examine the results.
Findings: The time spent watching comedy-variety-drama shows was negatively correlated ($p < .05$) with verbal and quantitative ability for girls. Time spent watching ***The Electric Company*** was positively correlated with quantitative ability for boys.
Duration: September 1976-completed.
Publications: (1) ***Phi Delta Kappan,*** May 1978. (2) A copy of the report is available from Dr. Perney for $1.00.

41-OF-4 EFFECTS OF TEST-LIKE EVENTS ON ACHIEVEMENT AND ON-TASK BEHAVIOR IN ELEMENTARY CLASSROOM PRESENTATIONS

Investigator(s): Gary R. McKenzie, Ph.D., Associate Professor, Department of Education, University of Texas, Austin, Texas 78712.
Purpose: To describe the effects of interspersing frequent test-like questions into oral instructive presentations on pupil attention, test anxiety, and achievement of lesson content.
Subjects: Elementary school children in first through fifth grades, who are predominantly Anglo and from middle class families.
Methods: A series of small-scale studies is being conducted using pupils assigned randomly to treatment groups. Treatments and procedures vary among studies. Generally, a posttest only design with random assignment to treatments is used. Pupils are assigned to classroom size treatment groups of about 25. Lessons for both groups are taught by a single instructor. The experimental condition involves inserting questions or instructions (which require an overt response from every pupil) at various points in the presentation. Control conditions involve various uses of the same presentation: (1) without questions of any kind; (2) with questions of an attention directing but noncognitive nature (e.g., "Point to the first example."); (3) with questions addressed to individuals and requiring only one response from one child; and (4) with questions concentrated at one or another point in the presentation. Pupils are observed for on-task and off-task behavior at intervals in the presentation, and comparisons of the number of individuals observed off-task at least once are computed by chi-square statistics. After the presentation and before administration of the posttest, pupils are asked to respond to Likert scale items measuring test anxiety. Achievement is tested at the transfer level and compared across groups.
Findings: Pupils in the test-events treatments are off-task less than pupils questioned as individuals. Test anxiety is not increased by use of frequent test events. (Anxiety scores for test events subjects tend to be lower.) Achievement is reliably enhanced in several trials using different content and ages of pupils.
Duration: February 1978-continuing.

41-OF-5 HALF-DAY VS. FULL-DAY KINDERGARTEN

Investigator(s): Fred L. Pigge, Ph.D., Director, Educational Research and Service, Bowling Green State University, Bowling Green, Ohio 43403.
Purpose: To determine whether children attending a full day of kindergarten score differently on academic and adjustment measures than children attending a half-day kindergarten program.
Subjects: Children in 14 classes of full-day kindergarten and children in 15 classes of half-day kindergarten.
Methods: Subjects were administered the Metropolitan Reading Readiness Test, Slosson Intelligence Test, and a measure of attitudes toward school. Sociometric data were collected.
Duration: September 1977-September 1978.

41-OF-6 ACCOUNTABILITY PROGRAM FIELD TEST

Investigator(s): Charles I. Schonhaut, Ed.D., Senior Assistant to the Chancellor; Gary M. Kippel, Ph.D., Assistant Director of Educational Research; Joseph Reswick, Ph.D.; and Ellen Koenigsberg, M.A., Principal Investigators, Office of Educational Performance and Accountability, Board of Education of the City of New York, 110 Livingston Street, Room 1028, Brooklyn, New York 11201.
Purpose: To improve pupil performance and school achievement.

Subjects: 7,809 fourth grade students in 62 elementary schools in New York City.
Methods: Based on recommendations, which were prepared by the staff of the Educational Testing Service of Princeton, New Jersey and a special committee (including representatives of various groups concerned with educational improvement), the school system launched its accountability program with a field test during the 1975-76 year. The goal is to identify the factors involved in educational achievement for which the school system can organize effective strategies for corrective action. Standardized reading achievement test data have been collected from students in 62 schools. Another aim of the study is to establish guidelines or standards to identify schools where children are not doing well and then take corrective action after weaknesses are pinpointed. Field test data were collected only for students who were in grade 4 during the 1974-75 academic year. The purposes of the field test include determination of the feasibility of collecting retroactive data and of performing longitudinal trend analyses. Data were collected, therefore, from the 1972-73 and 1973-74 academic years when these same students were in grades 2 and 3 respectively. Resulting longitudinal analyses will result in school progress measures for each school, assessment of the annual trends in scores, and estimates of pupil mobility. It will be possible, also, to determine if exceptional schools manifest exceptional performance for more than a 1-year period. In January 1977, the Carnegie Corporation awarded a $460,000 joint grant to the Office of Educational Performance and Accountability of the New York City Board of Education and the Educational Testing Service to develop minimum performance standards in reading. This project is designed to develop prototype procedures to be used for obtaining minimum performance standards in other grades and other subject areas.
Findings: Accomplishments to date: (1) The accountability program field test has been implemented in 62 elementary schools in all five New York City boroughs. (2) A longitudinal student identification system and computerized data base have been established. (3) A method to develop school progress measures has been recommended. (4) Preliminary statistical analyses of some educational process variables have begun to identify factors that demonstrate promise for improved pupil achievement. (5) Minimum performance standards for reading are being developed.
Duration: Spring 1975-Fall 1978.
Cooperating group(s): (1) Carnegie Corporation. (2) Educational Testing Service, Princeton, New Jersey.
Publications: A report will be published by the Office of Educational Performance and Accountability, Board of Education of the City of New York.

41-OG-1 CHILDREN'S PERCEPTION AND RECIPROCATION OF TEACHERS' SELF-DISCLOSING BEHAVIOR

Investigator(s): Linda Meyers, B.A., Graduate Student, Psy.D. Program, Graduate School of Applied and Professional Psychology, Rutgers University, Piscataway, New Jersey 08854; and Anita E. Woolfolk, Ph.D., Associate Professor and Acting Chairman, Department of Education, Douglass College, Rutgers University, New Brunswick, New Jersey 08903.
Purpose: To examine the effects of sex upon the perception, evaluation, and reciprocation of self-disclosing behavior between teacher and student in a classroom situation.
Subjects: 65 girls and boys attending sixth grade in a suburban elementary school.
Methods: The study addressed the following questions: (1) Do the sex of discloser (teacher) and sex of respondent (student) affect the evaluation of high vs. low intimacy self-disclosing behavior? (2) Is high self-disclosure by a teacher reciprocated by students? (3) Is sex a mediating factor in the process of reciprocating self-disclosure between teacher and child? Two written self-disclosure statements were prepared. One contained superficial personal information; the other, highly intimate information. Half the statements in each condition were attributed to a male teacher; half, to a female teacher. Thus, the four disclosure stimuli were: male speaker-intimate disclosure, male speaker-conventional disclosure, female speaker-intimate disclosure, and female speaker-conven-

tional disclosure. Each student received only one disclosure stimulus. After reading it, the subject completed a 10-item bipolar semantic differential to evaluate the probable performance of the teacher in the statement. Reciprocity of self-disclosure was measured by the 16-item Woolfolk and Woolfolk Child Disclosure Questionnaire (i.e., "If s/he were my teacher, I would talk to him/her about my secrets."). A student's self-disclosure score was the sum of all items to which the child responded "yes." Factor analyses of the semantic differential resulted in two factors named "Teacher Effectiveness" and "Teachers' Personal Qualities." From these two factors, two indices were developed. A 2 x 2 x 2 x 2 analysis of variance of these indices considered Speaker Sex x Subject Sex x Disclosure x Experimenter.

Findings: The following facts were found to be statistically significant: (1) Boys preferred low disclosing teachers, and (2) girls preferred female teachers and were more willing to disclose to them. Reciprocity of disclosure was not found.

Duration: June 1977-March 1978.

41-OG-2 IMPACT OF TEACHER MOVEMENT ON PUPIL ATTENDING

Investigator(s): Jay Bishop, Ph.D., Associate Professor, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada T6G 2E1.

Purpose: To study the impact of teacher movement on pupil attending in the classroom.

Subjects: 36 first grade boys and girls and nine teachers in nine classrooms.

Methods: A two-person team recorded observations of pupil attending and teacher stance every 5 seconds for one-half minute. Thirty-six observation intervals were recorded. The treatment condition consisted of a one-half hour session with the teachers from two experimental groups. One group received feedback by viewing a prepared videotape of a staged pupil/teacher interaction which discussed the effects of change in teacher presentation on the degree of pupil attending behavior. The other treatment group received feedback by viewing a prepared videotape of a staged teacher/classroom interaction in which pupil participation was discussed.

Duration: May 1978-June 1978.

Cooperating group(s): University of Alberta, Humanities and Social Science Research Fund.

Publications: (1) Bishop, J. ***The Bissel Centre Project.*** Unpublished manuscript, University of Alberta, 1976. (2) Bishop, J. Toward a practical theory of counselling elementary school children. In H. Zingle and E. Fox (Eds.), ***The elementary school counsellor in the decade ahead.*** Toronto: Holt, Rinehart, and Winston, 1972.

41-OG-3 DIMENSIONS OF SOCIALIZATION TO SCHOOL AND WORK IN KINDERGARTEN

Investigator(s): Margaret D. LeCompte, Ph.D., Assistant Professor, Foundations of Education; and Ida Santos-Stewart, Ph.D., Associate Professor, Department of Curriculum and Instruction, University of Houston, Houston, Texas 77009.

Purpose: To trace children's acquisition of norms and beliefs (before, during, and after kindergarten experience) relative to authority and task structures in school.

Subjects: 105 children, ages 4½ to 5½, approximately equally divided by sex and predominantly from the white middle class.

Methods: Data were collected in unstructured taperecorded interviews. Interviewers used photographs and drawings as stimuli to assist responses from the children. Statistical controls were established for socioeconomic status, preschool experience, and ethnicity. Children were interviewed at the beginning, in the middle, and at the end of their kindergarten year. Chi-square and analysis of covariance were used to analyze data.

Duration: September 1977-September 1978.

Cooperating group(s): University of Texas, Austin, Hogg Foundation for Mental Health.
Publications: A paper presented at the meeting of the Southern Anthropology Society, April 1978: What it's like in kindergarten.

41-OG-4 AN ETHNOGRAPHIC STUDY OF AN ELEMENTARY SCHOOL TEACHER'S ESTABLISHMENT AND MAINTENANCE OF GROUP NORMS

Investigator(s): Pamela K. Buckley, Ed.D., Ethnographer, College of Education, University of Houston, Houston, Texas 77004; and William J. Tikunoff, Ph.D., Far West Laboratory, 1855 Folsom Street, San Francisco, California 94103.
Purpose: To study the classroom management system of an elementary school teacher and the role of students in the establishment and maintenance of rules.
Subjects: One elementary school teacher; and 35 children, ages 11 to 13, in a fourth/fifth grade combination class (26 Mexican-American, 5 Black, and 4 Caucasian children of above average ability).
Methods: This study was part of the Effective Teacher Education Program at the Far West Laboratory for Educational Research and Development. Two ethnographers observed the teacher and class for 7 weeks. Observation began the first day of school in the fall and covered the teacher's entire school day.
Findings: The ethnographic data were analyzed and generated 15 findings related to the teacher's use of rules and the students' role in the process of establishing and enforcing rules.
Duration: August 1976-August 1977.
Cooperating group(s): National Institute of Education; Education Division; U.S. Department of Health, Education, and Welfare.
Publications: (1) Buckley, Pamela K. and Cooper, James M. Classroom management: A rule establishment and enforcement model. ***Elementary School Journal,*** March 1978. (2) Buckley, Pamela K. An ethnographic study of an elementary school teacher's establishment and maintenance of group norms. Unpublished doctoral dissertation, University of Houston, August 1977.

41-OG-5 THE DOUBLE VISION: ROMANTIC AND GROTESQUE VIEWS OF EDUCATION

Investigator(s): Sterling Fishman, Ph.D., Professor, Department of Educational Policy Studies, University of Wisconsin, Madison, Wisconsin 53705.
Purpose: To examine the change in the ways teachers and children are depicted in their relationships in 18th- and 19th-Century visual representations.
Methods: This is an historical iconological study using a vast number of visual representations.
Findings: The romantic and loving relationship replaced the adversarial one in common visual sources. The adversarial relationship then became one of caricature.
Duration: Winter 1977-Summer 1978.
Publications: A chapter in Finkelstein, Barbara (Ed.) ***Knowledge stuffed children.***

41-OG-6 TEACHING BEHAVIOR, ACADEMIC LEARNING TIME, AND STUDENT ACHIEVEMENT: FINAL REPORT OF PHASE III-B: BEGINNING TEACHER EVALUATION STUDY

Investigator(s): David C. Berliner, Ph.D., Former Project Director and Chairman, Department of Educational Psychology, University of Arizona, Tucson, Arizona 85721; and Charles W. Fisher, Ph.D., Project Director, Beginning Teacher Evaluation Study, Far West Laboratory, 1855 Folsom Street, San Francisco, California 94103.

Purpose: To examine the observable learning behaviors of 2nd and 5th graders in urban and suburban school districts; to validate the behaviors against cognitive growth measured by achievement tests; and to relate learning behaviors (e.g., engagement and error rate) to teaching behaviors and teacher characteristics.

Subjects: 71 girls and 65 boys (81 white, 55 nonwhite), ages 6 to 7, in 2nd grade; and 67 boys and 58 girls (90 white, 35 nonwhite), ages 9 to 10, in 5th grade.

Methods: This was a field study using correlational statistical techniques (primarily multiple regression) to examine naturalistic relationships. Testing, observation, teacher report, and interviews were used. Numerous instruments were used, including achievement tests and attitude scales, virtually all of which were unpublished materials developed at the Far West Laboratory for this study. Six target students were identified in each participating classroom. Intensive data were collected on the students over an entire school year.

Findings: Allocated time in instructional content, student engagement in instructional tasks, and low student error rate on instructional tasks have all been shown to relate positively to residual achievement. High student error rate relates negatively. Various teaching behaviors have been related to engagement and error rate.

Duration: July 1974-June 1978.

Cooperating group(s): National Institute of Education; Education Division; U.S. Department of Health, Education, and Welfare.

Publications: (1) Fisher, C.W. ***et al. Teaching behavior, academic learning time and student achievement: Final report of Phase III-B, Beginning teacher evaluation study.*** (2) The final report and a complete list of publications are available from the Far West Laboratory.

41-OG-7 THE RELATION OF LEARNER INATTENTION AND THE ACADEMIC ACHIEVEMENT OF 1ST AND 2ND GRADE STUDENTS AND SELECTED TEACHER CHARACTERISTICS

Investigator(s): Deborah J. Miles, M.S., Graduate Student; J. William Moore, Ph.D., Chairman; and Judith A. Schaut, M.S., Lecturer, Department of Education, Bucknell University, Lewisburg, Pennsylvania 17837.

Purpose: To determine the relationship between (1) a teacher's ability to control her teaching behavior and learner performance, (2) a teacher's ability to provide a theoretical oriented explanation of her efforts to remediate learner problems and learner performance, and (3) measures of learner inattention and learner performance in mathematics and reading.

Subjects: Seven 1st grade and eleven 2nd grade female teachers and their students.

Methods: Data were collected over an 8-week period. Each teacher was observed six to ten times, totalling 4 hours of observation. Information was recorded regarding student attention/inattention and teacher subject matter related questions.

Findings: No significant correlations were found between teacher control and amount of student inattention, or between theoretical orientation and student inattention. There was a positive correlation for 1st graders between inattention and achievement. Negative correlations were found for 2nd grade boys and girls between inattention and achievement, except for 2nd grade girls in reading.

Duration: Fall 1975-completed.

41-OG-8 HELPING BEHAVIOR IN CHILDREN

Investigator(s): Robert B. Hampson, Ph.D., Assistant Professor and Director of Counseling, Southern Methodist University, Dallas, Texas 75275.

Purpose: To determine relevant personality, ability, and learning-history backgrounds of particularly helpful vs. unhelpful children; and to define operationally "helping behavior."

Subjects: 90 Caucasian 8th grade students: 52 girls and 38 boys (average age, 14.52), enrolled in a public middle school.

Methods: Students in 8th grade homeroom classes rated peers on helpful/unhelpful, popular/unpopular categories. Next, each student took the following series of paper-and-pencil personality tests: (1) Eysenck Personality Inventory (Junior Version), (2) Bern Sex-Role Inventory, (3) Piers-Harris Self-Concept Scale, (4) Mehrabian Affiliative and Empathic Tendency Scale, and (5) self-ratings on helpfulness and popularity. In addition, subjects were observed across six behavioral helping tasks, separated across time and location: (1) rapidity of return of permission slips for the study, (2) classroom volunteerism for peer tutoring, (3) private (telephone) volunteerism for helping a handicapped child, (4) aid in picking up papers dropped by school secretary, (5) verbal responsiveness to a taped peer who was experiencing some interpersonal distress (each had a male and a female peer), and (6) time commitment to continue the interaction on a face-to-face basis with one of the taped peers. Behavioral scores were summed to present a composite behavioral helping index, with which sociometric and personality measures were compared. Behavioral scores were also analyzed through principal components analysis to determine types of helpful activity and personality styles of subjects who performed highly in these discrete areas. Family occupational, size, and economic/educational levels were also assessed.

Findings: Helpers are significantly better adjusted psychosocially and come from homes with higher levels of maternal education. Two discrete types of helpers exist: (1) peer-focused, outgoing, popular; and (2) cooperative, behind-the-scenes helpers, not regarded as highly by peers, but equally as healthy.

Duration: May 1977-October 1978.

41-OH-1 **COUNSELING, TUTORING, COMPENSATORY-DEVELOPMENTAL-REMEDIAL COURSES, AND THE SUCCESS OF HIGHER EDUCATION OPPORTUNITY PROGRAM STUDENTS IN METROPOLITAN NEW YORK INSTITUTIONS**

Investigator(s): George L. Mims, Ed.D., Director, Office of Special Programs, Pace University, Pace Plaza, New York, New York 10038; Beverly Lockett, M.A., Director, Higher Education Opportunity Program, Fordham University, Bronx, New York 10458; and Angel Gonzalez, B.S., Counselor, Higher Education Opportunity Program, Long Island University, Brooklyn, New York 11201.

Purpose: To determine the extent to which counseling, tutoring, and remedial-compensatory-developmental courses bear upon the success of Higher Education Opportunity Program students.

Subjects: 499 Higher Education Opportunity Program students (232 boys and 267 girls). The sample consists of university freshmen, sophomores, juniors, and seniors, who meet academic and economic program requirements.

Methods: Data were collected by a 43-item survey questionnaire and were analyzed by chi-square test (x^2) and integer frequency distributions and relative frequency percentiles for individual codes and categories.

Findings: Black students (52% of total population) appear to possess lower levels of academic degree aspiration than other students. Hispanics had the highest degree aspirations for the Bachelor's (BA) and professional degrees. Orientals and Caucasians possessed highest aspirations for attaining the Master's degree (MA). Girls had higher degree aspirations than boys; however, they were equal in their aspiration for the BA and doctorate (PhD) degrees. Girls chose Liberal Arts, Education, or other majors; boys selected Business Administration and Technology. There appears to be a pattern for professional degree aspirants to be Liberal Arts majors; Business Administration and other majors aspire to the BA or Associate degree. Education and Technology majors were usually MA aspirants; undecided students did not plan to obtain a degree. This relates to a statistically significant finding. More students were successful than unsuccessful (71.3% vs. 28.7%). Boys were 1.2% more academically successful than girls. Successful rather than unsuccessful students had higher aspirations and tended to possess higher aspirations for MA, PhD, and profes-

sional degrees. Only at the BA level did unsuccessful students manifest higher aspiration. Hispanic and other students were more successful than Black and Oriental students. Students who aspired to the BA degree indicated they planned to obtain the degree and seek employment. PhD and professional degree aspirants desired to graduate and pursue full-time studies. MA aspirants indicated that they would graduate, seek graduate studies part time, and be employed full time. Successful students, compared to unsuccessful students, tended to perceive themselves more positively. Successful and unsuccessful students reported that counselors were available always or most of the time, that counselors extended themselves to help, and students trusted them to keep confidences. These findings are significant at the .05 level of confidence. Successful students desired to pursue full- or part-time graduate studies. Unsuccessful students planned to complete the BA and seek employment. Boys planned to achieve the BA and seek employment; girls, to pursue advanced training on a full- or part-time basis. Blacks and Orientals planned to graduate and pursue part-time graduate studies; Hispanics and others, to graduate and pursue full-time studies. Whether based on academic success, sex, racial background, academic degree aspiration, or college major, 3/5ths of this population perceived their counselors positively. Successful and unsuccessful students utilized tutorial services approximately the same during the academic year. Unsuccessful students regarded the following variables as more important than successful students: tutor's (1) ability to explain and clarify materials, (2) attitudes and responsiveness to academic needs, (3) promptness and attendance, and (4) effect on the student's ability to study more effectively. More boys than girls had taken remedial-compensatory courses. Successful students had positive reactions to the courses and suggested that they provided a broader foundation for the next higher level courses. Unsuccessful students indicated that the courses were of no value and that they were uncertain about their effect.

Duration: May 1975-completed.

Cooperating group(s): State Education Department, Albany, New York, Higher Education Opportunity Program.

Publications: A copy of the report is available from Dr. Mims.

41-OH-2 EDUCATIONAL ASPIRATION, EXPECTATION, AND PARENTAL INFLUENCE: SOME PERSPECTIVES FOR THE 1980s AND 1990s

Investigator(s): George L. Mims, Ed.D., Director, Office of Special Programs, Pace University, Pace Plaza, New York, New York 10038.

Purpose: To ascertain the ways in which educational aspiration, expectation, and parental influence affect academic and vocational students in a suburban school setting.

Subjects: 348 students in grades 10 and 12: 228 vocational students and 120 academic students. The vocational students are 44.3% male and 55.7% female and are enrolled in BOCES, North Bellmore, New York. The academic students are 44.2% male and 55.8% female and are enrolled in local high schools.

Methods: The students were categorized by levels of aspiration, expectation, and parental influence. Data were collected using a survey questionnaire and were analyzed using chi-square test (X).

Findings: Female vocational students indicated higher aspirations for education at all degree levels than males (3/4ths of the vocational students did not indicate degree objectives). Academic girls had higher degree aspirations at the associate and bachelor (BA) degree levels; both sexes were equal at the master's (MA) level; and male academics had higher aspirations at the professional degree level (less than 40% of the academic students did not indicate degree objectives). Academic and vocational students who planned to go to college had higher degree aspirations at all levels (associate, BA, MA, and professional). Approximately 89% of the vocational students and 97% of the academic students indicated plans to graduate from high school and/or seek employment. White vocational and academic students had higher degree aspirations than nonwhites at all degree levels. Academic and vocational students who lived in a nuclear family had higher degree aspirations at all levels than students living in non-nuclear families (approximately 76% of the vocational

students and 85% of the academic students lived in nuclear families). More mothers than fathers of these students graduated from high school. More fathers than mothers had some college or a BA degree. Parents' influence on educational and degree objectives appeared to be strongest when compared to school counselors', friends', and others' influence. Academic students were more highly influenced at the associate, MA, and professional levels; vocational students, at the BA level and somewhat at the associate level. Academic students (approximately 89%) and 81% of the vocational students rated themselves average or better than other students of their age. Academic girls were proportionately higher among medium and low occupational aspirants. Vocational boys had higher occupational aspirations than girls at medium levels. Academic students who possessed high expectations indicated the BA, MA, and professional degree as their highest objective. Vocational students with high expectations chose the BA and MA degrees. All students who planned to attend college possessed high occupational aspirations; while their vocational counterparts, who planned to graduate and seek employment, possessed medium and low occupational aspirations. Successful vocational and academic students indicated higher levels of occupational aspiration in all categories (high, medium, and low) when compared with unsuccessful students. All students living in intact families possessed higher levels of occupational aspiration in all categories compared to students living in nonintact families. Academic students with high aspirations desired the associate, BA, MA, and professional degrees. Vocational students with high aspirations were highest in all degree categories except the professional degree, which was indicated by students with medium occupational aspirations. All students at all occupational aspiration levels indicated that they were not influenced by counselors to help them decide on a future occupation. Academic students who had high aspirations were not influenced by friends; students with medium aspirations were influenced a little; and those with low aspirations were influenced somewhat to a little. Vocational students were not influenced by friends at all occupational aspiration levels. Vocational students with high and low occupational aspiration levels were not influenced by older friends; academic students were influenced somewhat on all levels. Academic students with high aspirations were not influenced by their teachers but were very much influenced by parents. Medium aspirants were influenced quite a bit by parents and somewhat by teachers. Low aspirants were influenced a little by teachers and quite a bit by parents. Vocational students with high aspirations were influenced very much by parents; medium aspirants were equally divided between no influence and somewhat influenced; while low aspirants indicated no influence by parents. Vocational students with high, medium, and low aspirations were not influenced by teachers, and were not influenced by others such as boyfriend, neighbor, doctor, etc. Academic students with high occupational aspirations were very much influenced by others, medium aspirants were influenced quite a bit, and low aspirants were somewhat influenced.

Duration: Spring 1977-March 1978.

Publications: Copies of the report are available from the investigator.

41-OJ-1 **MOTIVATION AND GOALS: WHY PARENTS SEND THEIR CHILDREN TO NON-ORTHODOX JEWISH DAY SCHOOLS**

Investigator(s): Stuart Kelman, Ph.D., Director, Graduate Programs in Education, Hebrew Union College, 3077 University Mall, Los Angeles, California 90007.

Purpose: To study the motives and goals of parents who send their children to non-Orthodox Jewish day schools; and to suggest ways of minimizing goal discrepancy in order to increase the possibility of higher academic achievement.

Subjects: Parents of children who attended the seven non-Orthodox Jewish day schools in Los Angeles, California in September 1977.

Methods: Parents completed questionnaires surveying family background, their motivation for sending their children to the Jewish Schools, and their perception of the goals of the school.

Duration: May 1977-August 1978.

41-OJ-2 AN EXPERIMENT ON PARENT-ASSISTED INSTRUCTION IN THE THIRD GRADE

Investigator(s): Lyn Corno, Ph.D., Assistant Professor; and N.L. Gage, Ph.D., School of Education; and John Crawford, Ph.D., Center for Educational Research, Stanford University, Stanford, California 94305; and Nicholas Stayrook, Ph.D., Stanford Research Institute, Menlo Park, California 94025.

Purpose: To assess the effects of a parent-assisted Learning Skills Program (LSP) in the context of an experiment on teacher effectiveness.

Subjects: 840 third graders, ages 8 to 9, from predominantly middle class families in the San Francisco Bay Area. Subjects' parents were also involved in the study.

Methods: Based on previous research, the LSP was designed to develop cognitive and behavioral processes that successful students use in adapting to school. The curriculum model followed a technological approach, focusing on concept acquisition and the practice of appropriate reading material. For 6 weeks in the fall, LSP exercises were distributed to 416 third graders in 33 classes stratified on pretest ability and assigned randomly to treatments. Effects were assessed at two levels using the class and the individual student as the unit of analysis.

Findings: LSP group students scored significantly higher than controls on an achievement test covering LSP concepts – a result that was maintained on the same test 4 months later. Reading achievement was significantly improved for LSP students, particularly when program completion rates were high.

Duration: October 1976-May 1978.

Cooperating group(s): National Institute of Education; Education Division; U.S. Department of Health, Education, and Welfare.

Publications: Information is available from Dr. Corno.

41-OJ-3 STUDY OF PARENTAL PERCEPTION OF EARLY CHILD DEVELOPMENT

Investigator(s): Evalyn Rapparlie, Ed.D., Professor, Department of Elementary Education, State University of New York, Oswego, New York 13126.

Purpose: To accept or reject the null hypothesis: There would be no significant difference in perception of a child's development between parents of children who had been in preschool settings for at least 4 months and their teachers' perception of their development when there was no significant difference in perception of development upon the child's entering the preschool program.

Subjects: Parents of 2,000 children, ages 3 to 6, attending publicly supported programs. Parents were selected randomly from class lists supplied by preschools in England, Denmark, Switzerland, Austria, and the United States. An equal number of children was selected from each setting. Only parents were used whose first child was in preschool and whose initial perceptions were significantly the same as those of the teachers'.

Methods: Questionnaires, translated into the parents' native languages, were sent to parents of children entering publicly supported preschool programs in England, Denmark, Switzerland, Austria, and the United States. During the 2nd week after the child entered school, his/her teacher completed the same questionnaire as the parents. The 62-item questionnaire covered the child's social, intellectual, emotional, and physical development. Each item had five mutually exclusive responses. (Twelve of the original items had to be withdrawn to gain acceptance by the various governments concerned.) The process was repeated after the children had been in school from 4 to 6 months using the same questionnaire with both parents and teachers. Teachers completed the 2nd questionnaire only after they had made a formalized progress report to the parents, generally in the form of a conference. Questionnaires for specific children were then selected according to the following criteria: (1) all four questionnaires had been completed, (2) the child attended preschool regularly with no more than 3 consecutive days of absence, (3) the child was the only preschool child of those parents, and (4) the parents' and teachers' perceptions showed no signifi-

cant difference on the first administration of the questionnaire. Then, 500 samples were selected randomly from each of the four countries for further analysis.

Findings: Using a chi-square with 12 degrees of freedom, the null hypothesis was rejected in all areas of development except physical development. A highly significant difference was found between how parents perceived their child's development socially, emotionally, and intellectually after a period of time spent in a preschool setting. It was also found that the longer the child had been in school, the greater was the difference. There was no significant difference in the results between cultures.

Duration: 1974-completed.

41-OK-1 SITUATIONAL AND PERSONAL FACTORS IN SCHOOL DESEGREGATION

Investigator(s). Norman Miller, Ph.D., Professor, Department of Psychology, University of Southern California, Los Angeles, California 90007; and Harold Gerard, Ph.D., Professor, Department of Psychology, University of California, Los Angeles, California 90024.

Purpose: To analyze longitudinally personality, academic achievement, attitudinal, sociometric, and demographic data after implementation of a desegregation program.

Subjects: Approximately 1,800 children, ages 5 to 12. The sample includes Mexican-American, white, and black school children tracked longitudinally between 1967 and 1973.

Methods: The project staff assessed both long-term and short-term effects of desegregation. The major indices of success were academic achievement and emotional adjustment. The study focused on three antecedents or concomitant factors that may affect these dependent factors: characteristics of the child, his parents, and the school. The design was a 7-year, natural time series experiment consisting of a premeasurement and six successive postmeasurements. Selected matched control groups provided baselines to evaluate the effects of community sensitization, repeated testing of the sample, and general sociocultural changes occurring over the time span of the study. The basic research strategy was extensive multiple measures of all variables: achievement, personality, and adjustment of the child; parental values and attitudes; and school and teacher characteristics.

Duration: 1966-1978.

Cooperating group(s): (1) National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare. (2) National Institute of Child Health and Human Development; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare. (3) National Science Foundation. (4) Rockefeller Foundation. (5) California State Department of Compensatory Education.

Publications: (1) Miller, Norman and Gerard, Harold. How busing failed in Riverside. ***Psychology Today,*** June 1976, 10(1). (2) Gerard, Harold and Miller, Norman. ***School desegregation.*** New York: Plenum Press, 1975.

41-OK-2 INTERRACIAL EDUCATION PROJECT

Investigator(s): George W. Noblit, Ph.D., Assistant Professor, Department of Sociology; and Thomas W. Collins, Ph.D., Associate Professor, Department of Anthropology, Memphis State University, Memphis, Tennessee 38152.

Purpose: To conduct an ethnographic study of the processes of interracial schooling in a desegregated southern high school.

Subjects: Students enrolled in a southern high school.

Methods: This was an ethnographic investigation utilizing observation, in-depth interviewing, and document analysis.

Findings: Desegregation has resulted in little integration, since the stratification within the school led to resegregation.
Duration: August 1975-May 1978.
Cooperating group(s): National Institute of Education; U.S. Department of Health, Education, and Welfare.

Specific Skills

41-PA-1 CHILDREN'S PATTERNS WHEN DEALING WITH MEASUREMENT TASKS

Investigator(s): Charles E. Lamb, Ph.D., Assistant Professor, Department of Curriculum and Instruction, EDB 406, University of Texas, Austin, Texas 78712.
Purpose: To determine the verbal patterns of children when they are dealing with selected measurement tasks.
Subjects: Seven girls and three boys in third grade.
Methods: Children were taperecorded in clinical interviews during which they were presented with objects and were asked to use the transitive or substitutive principle to compare them. Tapes were analyzed for distinct verbal patterns; specifically, whether children made numerical or relational comparisons, whether they talked in terms of the range of the domain of measurement, or used technical (numerical) language.
Duration: May 1978-August 1978.

41-PB-1 SENSITIVITY TO ORTHOGRAPHY AS A FUNCTION OF AGE AND READING ACHIEVEMENT

Investigator(s): Richard L. Allington, Ph.D., Assistant Professor, Department of Reading and Center for Reading and Language Studies, State University of New York, 1400 Washington Avenue, Albany, New York 12222.
Purpose: To clarify the roles of age and reading achievement in sensitivity to orthographic knowledge.
Subjects: 25 fourth graders identified as good readers; 25 fourth graders identified as poor readers; and 25 second graders identified as good readers.
Methods: Miller, Bruner, Postman (1966) materials were employed in random order in a workbook format. Subjects had been screened for reading ability on the Woodcock Reading Mastery Tests.
Findings: Younger good readers and older poor readers, whose reading achievement levels were approximated, performed at near identical levels; while older good readers ranked significantly above either of the other groups.
Duration: March 1977-June 1978.
Cooperating group(s): State University of New York Research Foundation.

41-PB-2 ARE GOOD AND POOR READERS TAUGHT DIFFERENTLY?

Investigator(s): Richard L. Allington, Ph.D., Assistant Professor, Department of Reading and Center for Reading and Language Studies, State University of New York, Albany, New York 12222.
Purpose: To examine whether poor readers are created by instructional aberrations.

Subjects: 20 primary grade teachers and their top and bottom reading groups.
Methods: Teacher verbal interaction with reading group participants was audiorecorded and analyzed for quantity and quality of teacher interruptions during oral reading segments of lessons.
Findings: Teachers are more likely to interrupt poor readers and also more likely to cue these subjects to graphemic or phonemic cues in text.
Duration: December 1977-April 1978.
Cooperating group(s): Michigan State University, Institute for Research on Teaching.

41-PB-3 SENTENCE READING AND COMPREHENSION: A COGNITIVE MODEL

Investigator(s): Connie Lee Juel, Ph.D., Assistant Professor, Department of Curriculum and Instruction, Education Building, University of Texas, Austin, Texas 78712.
Purpose: To evaluate a model of cognitive operations that children use in reading and comprehending sentences.
Subjects: 64 second and fifth grade children, equally divided by sex, who were high and low ability readers.
Methods: Subjects were trained and tested on words in isolation. They then read sentences which contained the words and were asked to point out a picture illustration of the meaning of the sentence. A $2^4 \times 2^2 \times 2^6$ factorial design was used. The four word factors were syllables, decodability, concreteness, and frequency. The two sentence factors were length and reversibility. The six between subject factors were grade, sex, ability, school, sentence block, and replication. Data were analyzed by linear contrasts within ANOVA.
Findings: Results support an information processing model of reading for good readers and a more complex, interrelated model such as a hypothesis testing model for poor readers.
Duration: January 1977-completed.
Publications: Information is available from the investigator.

41-PB-4 COMPARISON OF TEACHERS' AND MOTHERS' VIEWS ON READING READINESS PREPARATION OF CHILDREN

Investigator(s): Elyse Fleming, Ph.D., Professor; and Ruth Mueller Hervatin, Ph.D., Assistant Professor, Department of Education; and Marvin B. Sussman, Ph.D., Professor, Department of Sociology, Case Western Reserve University, Cleveland, Ohio 44106.
Purpose: To compare the views of teachers and mothers on the reading readiness of children.
Subjects: Mothers of kindergarten and first grade, firstborn children from Black, Puerto Rican, and Caucasian groups; and the children's teachers.
Methods: This research is part of a larger project in which data were collected over a 3-year period from three school systems. Mothers were interviewed in August prior to their firstborn's entry into school. Mothers were interviewed twice during the first year and once a year thereafter. Teachers were interviewed every year in the fall. Questionnaires of 26 items were analyzed using chi-square analysis.
Findings: A preliminary analysis of the first sample found no racial, cultural, or socioeconomic differences among mothers. Teachers expected less readiness preparation than did mothers prior to school entry.
Duration: August 1974-August 1978.
Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.
Publications: A final report will be submitted to the Administration for Children, Youth, and Families.

41-PB-5 **THE EFFECTS OF A REMEDIAL READING AND CONTENT AREA READING PROGRAM ON THE ACHIEVEMENT OF 8TH GRADERS**

Investigator(s): Carl Helwig, D.Ed., Associate Professor, School of Education, Old Dominion University, Norfolk, Virginia 23508.
Purpose: To upgrade 8th graders' reading and language skills.
Subjects: 275 children in 8th grade at Woodrow Wilson High School, Portsmouth, Virginia during the 1976-1977 academic year, with random selection into samples amounting to 166 pupils.
Methods: The students' deficiencies in reading and language skills were determined by standardized testing, intelligence quotients, achievement in English, and teachers' judgments. Two four-group designs were created (one for language and one for reading) utilizing in each instance the Solomon Four Group Design (see Kerlinger, F.N. ***Foundations of Behavioral Research,*** 2nd Ed., 1973). Through pre- and posttesting, this design controls for treatment effects, history, maturation, and sensitization. Random assignment to groups was vindicated through the Kolgomorov-Smirnoff Goodness of Fit Test.
Findings: The measures used were Forms Q and R, Level 2, Comprehensive Tests of Basic Skills, McGraw-Hill, 1968. The published norms for grades 6.0 to 6.9 were the criteria set for these 8th grade subjects. Results of the reading experiment: $p \leq .05$; language experiment: $p \leq .10$.
Duration: Fall 1976-Spring 1977.
Cooperating group(s): Virginia State Department of Education, Richmond.
Publications: Information is available from the investigator.

41-PB-6 **AN ANALYSIS OF MIDDLE SCHOOL STUDENTS' READING SCORES AND REMEDIAL READING CURRICULUM**

Investigator(s): Beth Yvonne Darrow, B.A., Teacher, Mill Valley Middle School, 512 Edgewood Avenue, Mill Valley, California 94941.
Purpose: To examine the relationship between reading ability in middle school students and remedial reading curriculum to determine whether remedial reading curriculum causes an increase in reading grade scores.
Subjects: 20 suburban, middle school (grades 6, 7, and 8) boys, ages 11 to 14. The school is located in Marin County, California.
Methods: The students selected for the study were identified by their English teachers as reading below grade level. Following the initial referral, students were pretested to select those who were reading at least 2 years below grade level. These students were assigned randomly to either a control or to an experimental group. Students did not meet as separate groups. Treatment students received assigned remedial reading curriculum for 5 weeks within their individual English classes. The control group did not experience any change in their classroom reading program and did not receive additional remedial reading curriculum. Following a 5-week treatment period, students in both groups were posttested. A Fisher t-test was used to analyze data.
Findings: Statistical analysis revealed no significant difference between groups.
Duration: January 1978-May 1978.
Cooperating group(s): Far West Laboratory National Reading Consortium, San Francisco.

41-PC-1 **STUDENT ATTITUDES TOWARD SCIENCE COURSES IN TEST SCHOOLS USING HUMAN SCIENCES**

Investigator(s): James T. Robinson, Ed.D., Staff Associate, Biological Sciences Curriculum Study, Human Sciences Program, P.O. Box 930, Boulder, Colorado 80306.

Purpose: To assess the attitudes of 8th grade students who were in an experimental interdisciplinary science course; and to compare their attitudes with those of 8th graders in regular science courses in the same schools.
Subjects: 200 girls and boys, ages 13 to 14, enrolled in the Human Sciences Curriculum; and 200 girls and boys, ages 13 to 14, in regular science courses in five test schools distributed nationally.
Methods: This study is part of the Three Year Interdisciplinary Human Sciences Curriculum for the Middle Schools Project. The Biological Sciences Curriculum Study Human Sciences Program allows students to choose activities they find important and to study at their own pace. No single activity is required of any student. Different students, therefore, develop different curricula. A semantic differential instrument with 18 bipolar adjectives was administered by teachers. The pretested semantic differential developed for the study contained four subscales: evaluation, value, activity, and interest. Scale analysis (Scott, 1968) was used to verify the existence of the four subscales. A 2 x 5 x 2 factorial design using analysis of variance and multiple comparison analysis (SPSS) was utilized to test the effects of course, school, and sex.
Findings: Human Sciences students rated their course highly positive on all four scales. School and course were found to be significant factors (school, $p = .001$ to .03; course, $p = .001$), but sex was not. There was an interaction between sex and course on the interest scale. Girls had higher mean scores than boys ($p = .025$) in the Human Sciences course but had lower scores than boys in the regular science courses.
Duration: March 1971-January 1980.
Cooperating group(s): National Science Foundation.
Publications: A staff paper is available from the investigator.

Special Education

41-QD-1 **CHANGES IN LEARNING POTENTIAL OF ELEMENTARY SCHOOL CHILDREN IN AN INTENSIVE SHORT-TERM RESIDENTIAL ACADEMIC REMEDIATION CENTER**

Investigator(s): Harve E. Rawson, Ph.D., Professor; and David K. Moore, B.A., Department of Psychology, Hanover College, Lexington, Indiana 47243.
Purpose: To measure the increase in elementary school children's learning potential as a result of an intensive residential academic remediation program, in which the effects of the children's locus of control orientation and their IQs are statistically controlled.
Subjects: 24 boys, ages 6 to 10, referred by agencies to a residential, academic remediation center on the basis of severe behavior disorders, emotional disturbance, and/or cultural deprivation.
Methods: All subjects were administered the Analysis of Learning Potential Test (ALP) on the 2nd and 9th day of a 10-day intensive academic remediation program in a short-term residential camp setting. Locus of control scores of the same children were obtained using the Intellectual Achievement Responsibility Questionnaire (IAR). IQ estimates were also obtained using the Peabody Individual Achievement Test (PIAT). Pre- and posttesting changes on the ALP were examined relative to internality-externality scores (IAR) as well as IQ scores (PIAT). All three tests were given individually, but only the ALP was given on a prepost basis.
Findings: Learning potential increased significantly as a result of the intensive academic remediation even when locus of control and IQ were statistically controlled, since they are known to correlate significantly with learning potential. Both locus of control and IQ were found to correlate in the .50s with learning potential. After partialling out IQ and locus of control, learning potential still showed significant gain.
Duration: July 1977-completed.

Cooperating group(s): Englishton Park Academic Remediation and Training Center, Lexington, Indiana.
Publications: Moore, David K. Locus of control as it relates to increases in learning potential. Unpublished thesis, Hanover College Library, Hanover, Indiana.

41-QE-1 HEAD START LOCALLY DESIGNED OPTIONS: A DESCRIPTIVE ANALYSIS

Investigator(s): Dolores Kazanjian, Ph.D., Senior Consultant; and David Johnson, Mary Eccles, Charlotte Jefferson, Valerie Thomas, and Elizabeth Vernon, Investigators, Boone, Young & Associates, 551 Fifth Avenue, New York, New York 10017. Address correspondence to: Dr. Kazanjian, 2 Charlton Street, New York, New York 10014.
Purpose: To provide a descriptive analysis of the Head Start Programs choosing to operate Locally Designed Options, in order to provide information to the Administration for Children, Youth, and Families for program and policy development.
Subjects: 14 Head Start Centers: respondents included directors, staff, and some clients and community persons.
Methods: This was a descriptive analysis based on structured face-to-face interviews and on program observation using an observation guide. The data are presented in the form of case studies with summary and analysis in narrative form to highlight issues which should have an impact on program and policy development.
Findings: The results showed that Locally Designed Options have a positive impact on programs and clients. Some policy and procedural issues were also uncovered.
Duration: October 1976-completed.
Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.
Publications: Information is available from Mr. David O. Boone, President, Boone, Young & Associates.

41-QF-1 READING AS A FUNCTION OF AUDITORY AND VISUAL PROCESS TRAINING

Investigator(s): J. Michael Cook, M.Ed., Chief Evaluator/Special Education; and Michael W. Welch, Ed.D., Director, Division of Special Education, Center for Developmental and Learning Disorders, University of Alabama, Birmingham, Alabama 35294.
Purpose: To determine the effects of auditory or visual process training on the reading achievement of learning disabled students.
Subjects: 16 boys and 6 girls, who were identified by public school and educational and psychological testing as learning disabled.
Methods: Subjects participated for 21 weeks in one of three treatments to which they were assigned randomly. Treatments were reading and auditory process training; reading and visual process training; and reading only. Metropolitan Achievement Test scores for word knowledge, reading, and math were the dependent variables. A one-way analysis of variance with covariance for IQ was used to analyze the data.
Findings: There was no statistical difference in the achievement of the three treatment groups. Given the added time in instruction and added teacher effort, the reading only group appears to be the most efficient treatment method.
Duration: March 1977-August 1979.
Cooperating group(s): Bureau of Education for the Handicapped; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare.

41-QF-2 PASS-II MODEL PROJECT

Investigator(s): Monte D. Smith, Ph.D., Associate Professor and Research Director; and Paul R. Dokecki, Ph.D., Project Director, Program for Human Development Specialists, George Peabody College for Teachers, Campus Box 64, Nashville, Tennessee 37203.

Purpose: To design, implement, evaluate, and replicate a service delivery program to enhance the development of learning disabled children.

Subjects: Approximately 600 children, average age 9 to 10, who have been labelled as learning disabled. The subjects are from two major school systems; are 75% male, 81% white; have an average WISC-R IQ of 89; and are from lower middle and low socioeconomic levels.

Methods: A program of research, begun in 1974, has included experimental, quasiexperimental, and correlational studies. The emphasis has been on academic performance, Wechsler Intelligence Scale for Children-R subtest profiles, and self-concept (especially in relation to mainstreaming). Statistical methods range from chi-square contingency tables to factor analysis.

Findings: The self-concepts of children with learning problems are profoundly influenced by available peer reference groups. Findings support the utility of social comparison and group reference theory. Distinct (and replicable) WISC-R profiles have been found.

Duration: September 1974-August 1979.

Cooperating group(s): (1) Bureau of Education for the Handicapped; Office of Education; Education Division; U.S. Department of Health, Education, and Welfare. (2) Nashville-Davidson County School System. (3) Williamson County, Tennessee Schools.

Publications: (1) Smith, M.D. Experimental evaluation of social programs. ***International Journal of Oral Myology*** (in press). (2) Smith, M.D. Prediction of self-concept among learning disabled children. ***Journal of Learning Disabilities*** (in press). (3) Smith, M.D.; Zingale, S.A.; and Coleman, J.M. The influence of adult expectancy/child performance discrepancies upon children's self-concept. ***American Educational Research Journal*** (in press). (4) Strang, L.; Smith, M.D.; and Rogers, C.M. Social comparison, multiple reference groups, and the self-concepts of academically handicapped children before and after mainstreaming. ***Journal of Educational Psychology*** (in press). (5) Rogers, C.M.; Smith, M.D.; and Coleman, J.M. Social comparison in the classroom: The relationship between academic achievement and self-concept. ***Journal of Educational Psychology,*** 1978, 70, 50-57. (6) Smith, M.D. Stability of WISC-R scaled score profiles for learning disabled children. ***Psychology in the Schools,*** 1978, 15, 4-7. (7) Zingale, S.A. and Smith, M.D. WISC-R patterns for learning disabled children at three SES levels. ***Psychology in the Schools,*** 1978, 15, 199-204. (8) Approximately 12 additional unpublished papers are available from: Mary Leigh, Administrative Assistant, PASS-II Project, Box 64, Peabody College, Nashville, Tennessee 37203.

41-QF-3 INDIVIDUAL AND FAMILY APPROACHES TO IMPROVING COGNITIVE SKILLS IN CHILDREN MANIFESTING ACADEMIC DIFFICULTIES

Investigator(s): Eleanor Ruma-Blofson, Ph.D., Associate Professor, Department of Psychology; and Doris Gray, E.Ed., Director, Developmental Clinic, Long Island University, Brooklyn, New York 11201.

Purpose: To investigate approaches to improve cognitive skills in children with academic difficulties.

Subjects: 40 girls and boys, ages 8 to 11: largely minority children from low income families.

Methods: The intervention focuses on assessing the child's needs and interests, employing an understanding of child development concepts and educational activities. Work is beginning with families and siblings focusing on games and activities for developing cognitive strategies. A pre- and postintervention design is used. College students are employed as tutors. A psychological-educational approach is used.

Findings: Improvements have been made in children's reading. There are suggestions of self-concept changes.

Duration: September 1974-continuing.
Publications: Information is available from the investigators.

41-QF-4 **IDENTIFYING LEARNING DISABLED CHILDREN**

Investigator(s): Richard L. Egelston, Ph.D., Research Associate; and Reuben R. Rusch, Ph.D., Acting Director, Milne 121 Educational Research and Service Center, State University of New York, 440 Washington Avenue, Albany, New York 12203.
Purpose: To validate a screening battery of paper and pencil tests that can be used to screen learning disabled children in grades 1 and 3.
Subjects: Grade 1 Sample: 30 girls and boys selected randomly and 42 children referred by teachers from three school districts. Grade 3 Sample: 30 children selected randomly and 50 girls and boys referred by teachers from three school districts.
Methods: Children were tested individually with a screening battery consisting of an IQ test, and achievement, psychomotor, and developmental tests. They were tested several months later with criterion battery achievement tests. Analyses have included analysis of variance and covariance, factor analysis, and discriminant analysis for each grade.
Findings: Data for both Grades 1 and 3 indicate that students can be pooled across districts. It is possible to identify a set of tests that can be used to predict which students will be identified at a later date as learning disabled.
Duration: September 1976-June 1980.
Publications: (1) A paper presented at the New England Educational and Research Organization Meeting, Stockbridge, Massachusetts, May 1978: Identifying learning disabled children within an urban, suburban, and a rural district. (2) A paper presented at the American Educational Research Association Meeting, Toronto, Ontario, Canada, March 1978: Identifying learning disabled children.

41-QF-5 **A COMPARISON OF THE EFFECT OF THE PROPOSED OKLAHOMA STATE GUIDELINES: *CRITERIA FOR IDENTIFICATION OF LEARNING DISABILITIES* AND THE PROPOSED FEDERAL RULES AND REGULATIONS OF EDUCATION FOR ALL HANDICAPPED CHILDREN ACT P.L. 94-142**

Investigator(s): Kaye Theimer, Ph.D., Assistant Professor; and Coordinator, Psychoeducational Testing; and Lynn Lawrie Jones, M.A., Coordinator, TU-Stoia Learning Center; and Acting Coordinator, Learning Disabilities Program, University of Tulsa, 600 South College, Tulsa, Oklahoma 74104.
Purpose: To determine how many children previously diagnosed as learning disabled in a private clinic setting would be eligible for L.D. services by the proposed State of Oklahoma criteria guidelines (April 1978) in relation to the proposed Federal rules and regulations pertaining to specific learning disabilities (November 1976).
Subjects: 22 learning disabled students enrolled in the University of Tulsa Stoia Center; and 19 learning disabled students selected from an original sample study.
Methods: An analysis of the TU-Stoia Learning Center population's psychoeducational diagnosis was evaluated by following the State of Oklahoma's recommended grade level expectancy chart. A comparison was made between the above results and the previous findings with the TU-Stoia Learning Center population which implemented the proposed Federal formula. The Wechsler Intelligence Scale for Children and the Stanford-Binet Intelligence Scale were used to determine the full-scale IQ score. Specific skill areas were measured using the Peabody Individual Achievement Test, Peabody Picture Vocabulary Test, Picture Story Language Test, Durrell Analysis of Reading Difficulty, Standard Reading Inventory, Slosson Oral Reading Test, Spache Diagnostic Reading Scale, Wide Range Achievement Test, and Key Math.

Findings: Twelve of the 22 students would qualify without an evaluation team documentation to justify eligibility because of other factors. In the original study, five of the TU-Stoia Learning Center population would qualify solely on the basis of the computed discrepancy level formula. (See ***Research Relating to Children, Bulletin 39,*** March-August 1977, Study 39-QF-3, p. 152.)
Duration: March 1977-May 1978.

SOCIAL SERVICES

41-RA-1 FAMILY LISTENING POST

Investigator(s): Robert M. Rice, Ph.D., Director, Policy Analysis and Development, Family Service Association of America, 44 East 23rd Street, New York, New York 10010.
Purpose: To survey changes in presenting problems at family service agencies.
Subjects: 23 agencies that are members of the Family Service Association of America. Agencies represent all geographical regions of the United States and include small city, suburban, and large city service areas.
Methods: Agency personnel completed an open-ended questionnaire concerning changes experienced.
Findings: Major increases were reported in (1) male/female role changes, (2) financial/employment problems, (3) perceived problems with social services, (4) family violence, (5) adolescent stress, and (6) parenting problems. Family counseling needs are changing in definition.
Duration: Summer 1977-completed.
Publications: Rice, Robert M. ***Family listening post.*** New York: Family Service Association of America, 1977.

41-RA-2 CONSEQUENCES OF LATE ADOLESCENT CHILDBEARING IN THE EARLY 1970s

Investigator(s): Peter A. Morrison, Ph.D., Senior Staff, Rand Corporation, 1700 Main Street, Santa Monica, California 90406.
Purpose: To investigate the consequences of late adolescent childbearing in the early 1970s.
Subjects: Secondary analysis of the National Longitudinal Study of the High School Class of 1972 Panel Survey (done by N.C.E.S.). 20,000 students were involved in the survey.
Methods: Standard survey analysis techniques were employed.
Findings: Initial findings should be available at the end of 1978.
Duration: November 1977-May 1980.
Cooperating group(s): Center for Population Research; National Institute of Child Health and Human Development; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-RA-3 CHILD WELFARE SYSTEMS: WORKLOAD STANDARDS

Investigator(s): Allen McBride, M.S.W., Project Director; and Ron Reynolds, M.S.W., Assistant Project Director, Illinois Department of Children and Family Services, #1 North Old State Capitol Plaza, Springfield, Illinois 62706.
Purpose: To investigate the research conducted to date in the field of workload standards for professional child welfare workers; and to develop such a system for the Illinois Department of Children and Family Services.
Subjects: 150 department social workers.
Methods: Before proposing what standards should exist for the Department, an evaluation of current worker activity was conducted. A work measurement study was done of department social workers over a 3-month period. Methodology included utilizing a daily service sheet on which workers logged their time. These sheets were then keypunched and entered into the computer. The data were sorted into the average times workers spent with the various types of clients the agency serves.

Findings: (1) Professional staff spends an inordinate amount of time on paperwork, especially for Title XX. (2) Little research has been done anywhere in the country on workload/caseload standards for professional child welfare workers. (3) Over 25% of worker time is spent in organizational maintenance activities.
Duration: September 1976-September 1979.
Cooperating group(s): (1) Children's Bureau; Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare. (2) Peat, Marwick, and Mitchell.
Publications: A free report is available from Mr. McBride.

41-RA-4 SELF-ASSESSMENT TOOLS FOR CHILD WELFARE AGENCIES AND PROGRAMS

Investigator(s): Martin Sundel, Ph.D., Senior Research Associate; Juanita Lucas, M.S.W.; Jean Clarren, M.S.W.; and Geraldine Burt, M.A., Research Associates; and Carolyn Homan, B.A., Research Assistant, The Urban Institute, 2100 M Street, N.W., Washington, D.C. 20037.
Purpose: To determine the key issues and indicators that determine if an agency and/or a statewide program is performing effectively and efficiently; to develop criteria for major components within child welfare services against which administrators may measure agency performance to see if work is performed satisfactorily; and to develop related guidance and resource materials.
Subjects: Administrators and program staff of state and local child welfare agencies.
Methods: Self-assessment instruments in the form of checklists were used by local and state agency administrators and program staff to assess voluntarily their programs. Goals and criterion questions were used within the framework to assess programs and services. Resource materials were provided representing a compilation of best practices in child welfare and social service programs.
Findings: ***The Local Child Welfare Services Self-Assessment Manual*** was field tested in 17 sites throughout the United States to ensure that the content was relevant, useful, and comprehensive. The State Child Welfare Program self-assessment materials have been pretested in seven states.
Duration: June 1975-February 1979.
Cooperating group(s): (1) National Center for Child Advocacy; Children's Bureau; Administration for Children, Youth and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare. (2) State and local service agencies.
Publications: ***The Local Child Welfare Services Self-Assessment Manual*** and ***The State Child Welfare Program Self-Assessment Manual*** are available from the Children's Bureau.

41-RA-5 CHILD WELL-BEING STUDY: INTERIM REPORT

Investigator(s): Michael Adams, B.A., Principal Investigator; Daniel Solomon, Ph.D.; and Arthur Kendall, M.S., Consultant Experts; Michael O'Dell, B.A., Project Staff Member; and Harold Wallach, M.S., Manager, Social Program Area, Statistical Research Division, Bureau of the Census, Room 3612, Building 3, U.S. Department of Commerce, Washington, D.C. 20233.
Purpose: To develop methods for synthesizing and analyzing existing data relating to children aggregated at the state and metropolitan levels.
Subjects: This report is based on decennial census data – population and housing – in the State of Kentucky – aggregated by county.
Methods: Factor and cluster analysis were used to derive a typology of counties.
Findings: The factor and cluster techniques appear to have promise. Methods were applied and tested for the reduction and analysis of data for use in planning services to children. The most important finding is that these methods (factor and cluster analysis) work. A large body of decennial census data was successfully reduced by a combination of empirical and conceptual

techniques. In particular, the factor analysis produced a set of underlying factors which seem to make meaningful distinctions among counties of dimensions relevant to the well-being of children. The clustering techniques hold considerable promise for decision making and planning. By distinguishing types of counties based on measures of child well-being, the planner can determine which mix of services is appropriate to the problems of each type of county. The cluster analysis in this study produced a set of seven groups of counties that appear to represent distinct types.
Duration: October 1975-completed.
Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.
Publications: Wallach, H. ***et al. Child well-being study. Interim report.*** Washington, D.C.: U.S. Department of Commerce, Bureau of Census, 1977.

41-RB-1 **ASSESSMENT OF CHILD WELFARE DELIVERY SYSTEMS**

Investigator(s): Michael Lauderdale, Ph.D., Associate Professor; and Rosalie Anderson, Project Director, Resource Center on Child Abuse and Neglect, School of Social Work, 314 Social Work Building, University of Texas, Austin, Texas 78712.
Purpose: To develop profile/assessments of the states' protective services and child welfare delivery systems in Region VI.
Subjects: State social service agencies in U.S. Department of Health, Education, and Welfare Region VI (Arkansas, New Mexico, Louisiana, Oklahoma, and Texas); and medical practitioners, private social service agencies, and legal authorities surveyed in each state.
Methods: Site visits and personal interviews and surveys have been conducted with various persons and programs in each state that are involved in child welfare programs. Data and other information from each state were also analyzed.
Duration: June 1977-August 1978.
Cooperating group(s): (1) National Center on Child Abuse and Neglect; Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare. (2) Texas Title XX. (3) University of Texas, Austin, Graduate Studies.

41-RE-1 **STUDY OF TRENDS IN FOSTER CARE AND ADOPTION**

Investigator(s): H. Philip Hepworth, M.A., Program Director, Personal Social Services, The Canadian Council on Social Development, Box 3505 Station C, Ottawa, Ontario, Canada K1Y 4G1.
Purpose: To obtain an accurate picture of practices and policies in the child welfare services as they relate specifically to foster care and adoption; to collect continuous series of statistics on the operation of child welfare services since 1960, and to compare other relevant demographic and social developments in the period 1960 to the present day; and to review Canadian and other literature relating to the foster care and adoption of children.
Methods: In its entirety, the project constitutes a baseline statistical and descriptive study of the child welfare services with particular emphasis being placed on adoption and foster care. This study is seen as an essential first stage in the examination of the child welfare services in Canada.
Duration: October 1976-May 1978.
Cooperating group(s): (1) Health and Welfare, Canada. (2) Provincial Governments and Agencies.

41-RE-2 **FOLLOW-UP FOSTER CARE STUDY**

Investigator(s): Jerry L. Bahr, B.S., Chief; and Deborah Thomas-Taylor, B.S., Research Analyst, Division of Research and Statistics; and Alreta Fritts, M.S.W., Coordinator of Foster Care and Project Director, Division of Social Services, Nebraska Department of Public Welfare, 301 Centennial Mall South, Lincoln, Nebraska 68509.

Purpose: To evaluate the success of a foster care planning project.
Subjects: Approximately 2,500 foster children under the care of the Nebraska Department of Public Welfare.
Methods: A permanent planning project was initiated as a result of the Nebraska Department of Public Welfare study of foster care in 1975. This follow-up study is an evaluation of the permanent planning project. Survey forms were completed by local case managers. The collected information included age, sex, legal status, reason for placement, future plans, living arrangement, and services provided. The data were analyzed using the Statistical Package for the Social Sciences.
Duration: February 1978-November 1978.
Cooperating group(s): Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.
Publications: Information is available from Jerry L. Bahr, Chief, Division of Research and Statistics.

41-RF-1 A COMPARATIVE PERSONALITY ASSESSMENT AMONG MALE CAREGIVERS, FEMALE CAREGIVERS, AND MALE ENGINEERS

Investigator(s): Bryan E. Robinson, Ph.D., Assistant Professor, Department of Human Development and Learning, University of North Carolina, UNCC Station, Charlotte, North Carolina 28215.
Purpose: To compare the personality traits of a random sample of male day care teachers with those of a matched sample of female day care teachers in similar settings; to determine how male caregivers are alike or different in personality type from males in other occupational roles (specifically those traditionally defined as "masculine"); and to conduct a 2-year, follow-up study of male caregivers to determine the rate of job turnover.
Subjects: A random sample of 20 male caregivers (mean age, 30.2; mean education, 15.95) was contrasted to 20 male engineers matched on age (37.35) and education (16.2). An additional group of 20 female caregivers was matched by day care center (mean age, 32.3; mean education, 15.3).
Methods: A personality assessment was conducted for all three groups. All groups were administered the Adjective Checklist. Personality variables were assessed including personal adjustment, self-confidence, self-control, and heterosexuality. Eleven additional scales were assessed, and the resulting data were analyzed by a one-way analysis of variance. As additional descriptive data, a 2-year follow-up was conducted by telephone. This allowed some comparison of the turnover rates between men and women in this field. For those men who left the field, an analysis was made related to the types of jobs they entered.
Duration: August 1976-August 1978.
Cooperating group(s): (1) Foundation of the University of North Carolina, Charlotte. (2) State of North Carolina.

41-RF-2 SOCIAL-EMOTIONAL ECOLOGIES OF FAMILY DAY HOMES VS. GROUP CARE FOR 4-YEAR OLDS

Investigator(s): Robert B. Innes, Ph.D., Associate Professor, Director, Child Development Specialist Program, Box 67, George Peabody College for Teachers, Nashville, Tennessee 37203.
Purpose: To assess the basic social-emotional climates existing in family day homes vs. group care facilities focusing on two basic dimensions: (1) the quality of social participation of children, and (2) the quality of adult-child interaction.
Subjects: Children, age 4, from middle and low income groups.
Methods: Data were collected in two group day care facilities and approximately 10 family day homes with a precoded observational system. Data were collected using DATAMYTE, a portable

electronic digital recording system. Each subject was observed 12 times, once in each of twelve 15-minute time segments, between 9:00 A.M. and 12:00 P.M.
Duration: November 1977-December 1978.
Cooperating group(s): Foundation for Child Development, New York, New York.

41-RF-3 EFFECTS OF INDIVIDUALIZED GESTURAL IMITATION CURRICULUM ON INFANT CAREGIVER BEHAVIORS

Investigator(s): Joyce E. Digby, M.S., Instructor, Department of Education, San Antonio College, 1300 San Pedro, San Antonio, Texas 78284.
Purpose: To determine what effect, if any, a specific training module would have on the generalized behavior of infant caregivers.
Subjects: 27 female caregivers, ages 18 to 68, responsible for two or more infants under 19 months old. The caregivers were previously untrained in group care skills.
Methods: The experimental group (11 caregivers) received limited training with a gestural imitation curriculum by Winkelstein and Wolfson; the control group (16 caregivers) received no training. All 27 caregivers were evaluated on the Honig-Lally Assessing Behaviors of Caregivers-I Scale. The hypothesis predicted that the experimental group would have a significantly higher mean score on the overall posttest and on two sections of the test (Social-Emotional: Positive Inputs and Piagetian Tasks), while having a lower mean score on one section (Social-Emotional: Negative Inputs). The research involved a randomized control group, posttest-only design. This generated two sets of independent means that were analyzed using the student's *t* statistical test.
Findings: The predicted trend occurred in three of the four analyses. Only one section of the posttest showed a significant difference in scores at the $p = .05$ level. The small sample size made it difficult to detect significant differences. More extensive training also may be necessary for significant differences in posttest scores.
Duration: September 1977-March 1978.
Cooperating group(s): (1) Texas Woman's University. (2) San Antonio Association for the Education of Young Children.
Publications: A thesis based on this research is available from University Microfilms International, 300 North Zeeb Road, Ann Arbor, Michigan 48106.

41-RF-4 ALTERNATIVE CHILD CARE ARRANGEMENTS IN A SELECTED AREA OF ST. LOUIS CITY: EFFECTS, COSTS, SATISFACTION WITH SERVICE

Investigator(s): Lynne McLaughlin, Ph.D., Psychologist and Project Coordinator; and Henrietta Cox, Ph.D., Sociologist and Coordinator, School of Medicine, St. Louis University Medical Center, 1402 South Grand Boulevard, St. Louis, Missouri 63104.
Purpose: To assess the effectiveness of different kinds of child care plans on children's social, emotional, physical, and cognitive development; to determine the satisfaction of parents with the services and the extent to which they perceived them as furthering goals for themselves and the children; and to compare the cost of the services to families and/or to the community.
Subjects: 138 black children, ages 3 and 4; and 152 black children, age 5, attending child care centers in a low income area of northwest St. Louis. Sex was distributed randomly.
Methods: A feasibility sample of 20 children was chosen from each of four different types of child care plans: half day preschool; child care center supported by United Way; private, for profit, educational and day care center; and family day care home. Pre- and posttests, separated by approximately 6 months, were administered to the subjects by trained psychologists. The test battery included measures of height and weight; Kephardt Scale of Gross Motor Development; Slosson Intelligence Test; Beery-Buktenica Test of Visual-Motor Perception; ACLC Test of Language Comprehension; picture recognition; numbers, comprehension, and sentence subtests of the

Wechsler Preschool Intelligence Test; letter naming and letter matching parts of the Wide Range Achievement Test; Dog and Bone Test of Creativity; Goodenough-Harris Draw-a-Person Test of Emotional and Intellectual Maturity; color recognition; evaluation of weight and of size; and the California Test of Social Competency. The KIDS Test was used for all 5-year olds. Statistical analyses included factor analysis, descriptive statistics, and one-way analysis of variance and of covariance with unequal n's. Covariates were age at time of testing, length of time in the center, family income, and (when change scores were analyzed) the pretest score.

Findings: Few or no significant differences occurred among children's scores in the several child care plans when the covariates were taken into account. Heterogeneity was as great within services as between them. Test performance varied markedly in each center over the 2 years of the study. The largely cognitive nature of the battery prevented impartial assessment of the effectiveness of those services which had primarily noneducational goals. Lack of provision for studying centers further precluded linking children's test performance with center programs. Parent characteristics, expectations, and satisfaction were similar in many regards. Cost of care is greatest in day care centers where there is extensive work with families.

Duration: February 1976-December 1978.

Cooperating group(s): United Way of Greater St. Louis, Allocation and Research Committee.

Publications: A final report is available from the Allocation and Research Committee, United Way of Greater St. Louis Missouri.

41-RG-1 FACILITATING LONG-TERM OPTIMAL PLANNING FOR CHILDREN

Investigator(s): Patricia W. Cautley, Ph.D., Project Director, Division of Community Services, Wisconsin Department of Health and Social Services, 2020 University Avenue, #2, Madison, Wisconsin 53705.

Purpose: To facilitate permanent plans for children, preferably in their own homes; and to test the effectiveness of short-term (8 to 12 weeks) intensive in-home intervention with dysfunctional families evidencing problems in parent-child interaction so that eventual removal of the children to substitute care may be necessary if no change in the interaction occurs.

Subjects: 34 families (13 single parents) with 74 children (48 boys and 26 girls, ages 2 through 11, but including a few children beyond this age range). A family was not eligible if problems were primarily those of adolescence. All families were referred by a helping professional.

Methods: Data collection includes an initial interview and three systematic observations of interaction within the family with all members present, development of a treatment plan with specific goals, detailed records of all treatment sessions, and a final interview and observation. Comparisons will be made of the frequency of certain behaviors in the pre- and postobservations as well as estimates by referring worker, family members, and staff related to changes in the family. The focus of the study is on teaching parenting skills and on modifying specific behaviors.

Findings: Permanent plans are judged to have been facilitated in two-thirds of the families. Positive changes have occurred in most of the families so that later removal of child(ren) is judged unlikely. Failure of treatment in one family led to termination of parental rights and adoption of children.

Duration: January 1977-September 1978.

Cooperating group(s): (1) Dane County Department of Social Services. (2) Madison, Wisconsin Public School System. (3) Lutheran Social Services. (4) Children's Service Society. (5) Dane County Mental Health Center.

41-RH-1 TWO COMMUNITY PROTECTIVE SERVICE SYSTEMS: NATURE AND EFFECTIVENESS OF SERVICE INTERVENTION

Investigator(s): Clara L. Johnson, Ph.D., Vice President for Research, Regional Institute of Social Welfare Research, Inc., P.O. Box 152, Athens, Georgia 30603.

Purpose: To determine and assess the nature of services delivered to children and their families; to determine the effectiveness of service intervention; and to develop models for training and service delivery systems.

Subjects: Protective service unit staff in both sites and the total population of families (case records) in each site that was reported during the period of the study for abuse and neglect according to the Regional Institute's definition for case inclusion.

Methods: This study is evaluation research utilizing an exploratory descriptive design. Data were collected through structured interviews with protective service staff and a structured schedule to which case data were transferred from agency records. The research project was unique in two ways: (1) a set of evaluation criteria was utilized to evaluate effectiveness of intervention in an ***innovative*** system and in a more traditional one; and (2) the present research is part of a larger piece – the total being couched in a systems perspective.

Findings: Data have been analyzed and a report has been written. The findings tend to suggest that there is a lack of success in both systems' service intervention as measured by the following criteria: (1) recidivism, (2) length of time between reported incidents, (3) severity of subsequent harm, (4) rehabilitation of perpetrator, and (5) agency disposition. The data and insights gained through the conduct of the study suggest three major problematic areas which might include factors contributing to the apparent lack of success: (1) systems operations, (2) the dispositional process – agency and court, and (3) the case handling process – staff and service delivery.

Duration: Fall 1973-completed.

Cooperating group(s): Social and Rehabilitation Service; U.S. Department of Health, Education, and Welfare.

Publications: A monograph, Two community protective service systems: Nature and effectiveness of service intervention, is available for $5.00 (or if purchased with Volume I (Systems Operations), $8.00) from: Regional Institute of Social Welfare Research, Inc.

41-RH-2 PARENTAL STRESS CENTER

Investigator(s): John B. Reinhart, M.D., Director, Division of Behavioral Science, Children's Hospital of Pittsburgh; and Professor of Pediatrics and Psychiatry, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania 15213; and Barbara S. Schultz, A.C.S.W., Director; and Elizabeth Elmer, M.S.S., Director of Research and Training, Parental Stress Center, 918 South Negley Avenue, Pittsburgh, Pennsylvania 15232.

Purpose: To determine the effects of the Parental Stress Center's residential treatment program on abused infants and infants' high risk for abuse; and to identify and treat abused and neglected children and their families.

Subjects: Infants, under age 1, identified in hospitals as abused or at risk, reported to Child Welfare Service agencies and with Juvenile Court attention. Three groups of infants are involved in the study: (1) approximately 38 infants admitted to the Parental Stress Center residential program because of abuse or high risk for abuse; (2) a normal control group of 38 infants matched by age, race, sex, socioeconomic status, birth order, and length of gestation; and (3) a problem control group of 38 abused and high risk infants, not treated at the Stress Center, matched on the same variables.

Methods: At three times during each child's first year, the following data are collected: anthropometric measures, developmental assessments (Bayley Scales of Mental and Motor Development; Uzgiris-Hunt Ordinal Scales of Psychological Development); and a videotaped recording of mother-infant interaction during feeding, teaching, and play. Reaction to a stranger is also assessed. Coders, blind to the group classification of the infants, will rate the videotapes according to the Barnard Behavioral Observation Scales and Wood Infant Mental Health Profile (Attachment Scale).

Duration: August 1977-July 1981.

Cooperating group(s): (1) Bureau of Community Health Services; Health Services Administration; Public Health Service; U.S. Department of Health, Education, and Welfare. (2) Allegheny County Child Welfare Services. (3) Allegheny County Juvenile Court.

41-RH-3 CLIENT IMPACT STUDY

Investigator(s): Michael Lauderdale, Ph.D., Associate Professor; and Rosalie Anderson, Project Director, Resource Center on Child Abuse and Neglect, School of Social Work, 314 Social Work Building, University of Texas, Austin, Texas 78712.
Purpose: To determine the effects of alternate models of service delivery on clients.
Subjects: Approximately 200 identified parents in families where abuse and neglect have been substantiated.
Methods: Parents were given personality tests; case information was reviewed; and personal interviews were conducted with workers in protective services programs utilizing volunteer lay therapists, multidisciplinary teams, contract services, and traditional child welfare services.
Duration: June 1977-August 1978.
Cooperating group(s): (1) National Center on Child Abuse and Neglect; Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare. (2) Texas Title XX. (3) University of Texas, Austin, Graduate Studies.

41-RH-4 CHILD FATALITIES STUDY

Investigator(s): Michael Lauderdale, Ph.D., Associate Professor; and Rosalie Anderson, Project Director, Resource Center on Child Abuse and Neglect, School of Social Work, 314 Social Work Building, University of Texas, Austin, Texas 78712.
Purpose: To develop client profiles and systems information relating to nonaccidental child fatalities in Texas from 1974 to 1976.
Subjects: 271 children and data relating to their families with a comparative cohort of 5,000 children where abuse and neglect have been substantiated but have not resulted in child fatality.
Methods: Information was analyzed from the Texas Central Registry and from case records and is being analyzed from personal interviews with workers. The focus will be on developing individual profiles of parents and also on analysis of systems aspects.
Duration: June 1977-August 1978.
Cooperating group(s): (1) National Center on Child Abuse and Neglect; Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare. (2) Texas Title XX. (3) University of Texas, Austin, Graduate Studies.

41-RH-5 ETHNICITY STUDY

Investigator(s): Michael Lauderdale, Ph.D., Associate Professor; and Rosalie Anderson, Project Director, Resource Center on Child Abuse and Neglect, School of Social Work, 314 Social Work Building, University of Texas, Austin, Texas 78712.
Purpose: To determine variations in causality of child abuse and neglect based on ethnicity of perpetrator.
Subjects: A population of 5,000 substantiated cases of abuse/neglect in Texas.
Methods: Data have been collected from the Texas Central Registry.
Duration: June 1977-August 1978.
Cooperating group(s): (1) National Center on Child Abuse and Neglect; Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare. (2) Texas Title XX. (3) University of Texas, Austin, Graduate Studies.

41-RH-6 CHARACTERISTICS AND MANAGEMENT OF CHILD ABUSE AND NEGLECT AMONG MILITARY FAMILIES

Investigator(s): Sandra Maley Schnall, M.S.W., A.C.S.W., Research and Planning Specialist, Project CARE, P.O. Box 66, Social Work Service, Brooke Army Medical Center, Fort Sam Houston, San Antonio, Texas 78234. Address correspondence to: Ms. Schnall, 510 Stockton, San Antonio, Texas 78216.

Purpose: To identify the reported rate, demographic characteristics, case management issues, and disposition of child abuse and neglect in the military community.

Subjects: 195 active duty and retired military families reported to civilian and military child protection staff (Department of Human Resources and Military Child Advocacy Officers) for suspected child abuse and neglect.

Methods: Data collection methods included case record reviews, interviews with primary service providers, and attendance at multidisciplinary team meetings. Cases reported during a 7-month period were followed prospectively – from the point of entry into the military or civilian service delivery system through case closure or stabilization in treatment.

Findings: Half the referrals were established as abuse/neglect cases; one-third were invalidated; and the remainder of the cases were suspected. One-fourth of the victims were under age 3, and another fourth were teenagers. Prior abuse was suspected or substantiated in half of the cases. Males were responsible for abuse three times as often as females. Spouse abuse was evident in 18% of the cases. Legal action, usually involving temporary removal of the child for his protection, was taken in 15% of the cases. Joint military-civilian intervention was involved in 40% of the cases. Data failed to support the widespread assumption that the reported rate of child abuse/neglect is higher in the military than in the civilian population.

Duration: September 1976-completed.

Cooperating group(s): National Center on Child Abuse and Neglect; Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

Publications: (1) Hunter, E.J. and Nice, D.S. (Eds.) ***Children of military families: A part and yet apart.*** Washington, D.C.: U.S. Government Printing Office, 1978. (2) Information is available from the investigator.

41-RH-7 SUMMATIVE EVALUATION OF CHILD ABUSE AND NEGLECT DEMONSTRATION TREATMENT PROJECTS

Investigator(s): James Kent, Psychologist, Children's Hospital of Los Angeles, 4614 West Sunset Boulevard, Los Angeles, California 90027; Jean Layzer, M.A., Project Manager, Abt Associates, 55 Wheeler Street, Cambridge, Massachusetts 02138; and Martha L. Coleman, B.A., Senior Consultant and Project Manager, Impact Evaluation, E.H. White & Co., Inc., 245 Clement Street, San Francisco, California 94118.

Purpose: To assess and document the impacts and effects of demonstration projects within their communities and the effectiveness of project services.

Subjects: 20 projects serving abusing/neglecting families. The projects serve children (age range: infant through teens), their parents, guardians, and siblings. Extended families are also served.

Methods: A case study approach was used, including collection of questionnaires from all clients served during a 6-week period. Records were reviewed and interviews were conducted with project staff and impacted community groups and individuals. Control groups were not possible because of the grant award process and the resulting variety of projects funded. Formative evaluation data from E.H. White & Co. and CPI Associates are also being studied.

Findings: Formative findings from E.H. White and CPI indicate quarterly/annual program costs and other descriptive data on project objectives and operations.

Duration: August 1977-December 1978.
Cooperating group(s): (1) 20 demonstration projects. (2) National Center for Child Abuse and Neglect; Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.
Publications: Information is available from Ms. Jean Layzer, Abt Associates.

41-RI-1 THE HENNEPIN COUNTY FAMILY STUDY PROJECT

Investigator(s): James E. Wiechers, Ph.D., Director and Associate County Administrator; and Carole Murphy, Director/Unit Supervisor, Prevention of Placement Project, Family Services Division, Hennepin County Welfare Department, 300 South Sixth Street, Minneapolis, Minnesota 55487.
Purpose: To determine whether early intervention in the form of intensive supportive services to families can prevent the need for child placement, result in overall cost savings, and improve family and child well-being.
Subjects: 45 client families selected from families undergoing intake for Welfare Department social and protective services, who are judged to be in jeopardy of child placement. Families cannot have made-use of placement in the past 3 years; a parent or guardian must be available to participate in services; a child may not be in imminent peril caused by neglect or abuse; and a child considered in danger of placement may not be more than 15 years old.
Methods: This is a 3-year demonstration project. Client families are served by three social workers with caseloads of 15 families each. An equivalent number of families selected as eligible will be assigned randomly to a control group and receive regular agency services. Data are collected during six phases of the program's functioning: at preliminary screening, at in-depth screening, during intervention, at case termination or 6 months after opening, at 12 months, and at 18 months. Development of a standard client screening instrument to identify high risk families is a goal of the project's early phase. Ongoing evaluation will be made by means of standard assessment instruments, by service documentation, and by client and social worker reports. Evaluation of the project will be designed and performed by the Program Evaluation Resource Center, an independent research/evaluation firm.
Duration: January 1978-September 1980.
Cooperating group(s): (1) Program Evaluation Research Center, Minneapolis, Minnesota. (2) National Institute for Advanced Studies, Washington, D.C. (3) National Center for Child Advocacy: Children's Bureau; Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

41-RI-2 HUDSON COUNTY PREVENTIVE SERVICES DEMONSTRATION PROJECT

Investigator(s): Mary E. Clifford, Project Director, Hudson County Preventive Service Demonstration Project; Stephen Magura, Program Development Specialist; and J. Daniel Keppel, Project Evaluator, Bureau of Research, New Jersey Division of Youth and Family Services, 550 Summit Avenue, Jersey City, New Jersey 07306.
Purpose: To create and evaluate a comprehensive network of preventive social services for families at high risk for child out-of-home placement.
Subjects: Over 100 families selected from new applicants to the highly urban Hudson County office of the state child welfare agency. Eligible families are chosen from applicants whose requests for services include financial needs, housing problems, child behavior problems, development disabilities, parental illness/disabilities, inability to manage a home, or parent-child conflicts.
Methods: The intensive services network (which includes a social worker unit with low caseloads, emergency fund, and legal advocate) is evaluated for service and cost effectiveness primarily through a case outcome comparison between two types of control groups and the project experimental families. Computer-assisted quantitative analyses of several family-functioning/information

instruments and data sources will be supplemented by periodic qualitative studies of the known and unknown control and demonstration subgroups. The ability of the agency to divert (in the short run) and reallocate (in the long run) resources to disrupted families at risk of foster care placement will be assessed.

Duration: October 1977-October 1980.

Cooperating group(s): (1) National Institute for Advanced Studies, Washington, D.C. (2) State of New Jersey, Division of Youth and Family Services, Bureau of Research. (3) Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare.

41-RI-3 SOCIAL AND ECONOMIC CHARACTERISTICS OF FAMILIES RECEIVING ASSISTANCE DURING MARCH 1977

Investigator(s): Jerry L. Bahr, B.S., Chief; and Dorothy Wilson, B.S., Project Manager, Division of Research and Statistics, Nebraska Department of Public Welfare, 301 Centennial Mall South, Lincoln, Nebraska 68509; and Christopher Masters, Ph.D., Associate Professor, Doane College, Crete, Nebraska 68333.

Purpose: To examine the characteristics of Nebraskan families who received aid to dependent children (AFDC) during March 1977.

Subjects: 747 active AFDC nonfoster care families from a statewide random sample.

Methods: A survey form was designed by the staff of the National Center for Social Statistics; U.S. Department of Health, Education, and Welfare. Survey forms were completed by county caseworkers from AFDC case records. The data were analyzed using the Statistical Package for the Social Sciences. Demographic and case characteristics of the families were obtained.

Duration: February 1977-completed.

Cooperating group(s): National Center for Social Statistics; U.S. Department of Health, Education, and Welfare.

Publications: Information is available from Jerry L. Bahr, Chief, Division of Research and Statistics.

41-RK-1 FACTORS RELATED TO COMPLETION OR WITHDRAWAL IN FAMILY THERAPY

Investigator(s): James Stedman, Ph.D., Chief Psychologist; and Tom Gaines, Ph.D., Staff Psychologist, Community Guidance Center of Bexar County, 2135 Babcock Road, San Antonio, Texas 78229.

Purpose: To investigate factors related to family therapy success or withdrawal.

Subjects: 96 families.

Methods: Demographic and other data (including data from a semantic differential questionnaire) were assessed in relation to the number of sessions completed and therapist judgment regarding completion.

Duration: August 1977-August 1978.

41-RL-1 NATIONAL EVALUATION OF RUNAWAY YOUTH PROJECTS

Investigator(s): Anne Harris Cohn, D.P.H., Associate; and Charles Froland, D.P.H., Senior Analyst, Berkeley Planning Associates, 2320 Channing Way, Berkeley, California 94704.

Purpose: To determine the extent to which federally funded runaway youth programs have implemented the goals of the Runaway Youth Act; to determine the impacts projects have had on clients served; and to investigate, generally, the appropriateness of the goals of the Runaway Youth Act.

Subjects: 20 representative projects: On average, 20 youths, ages 12 to 16, served by each project; and their families.

Methods: Through interviews with staff members of the 20 projects and representatives from community agencies, an assessment will be made of the extent to which the projects have initiated the services and mechanisms (1) to assist youths during a runaway episode, (2) to help to alleviate youths' problems, (3) to assist youths in finding stable living conditions, and (4) to help youths decide on a future course of action. Through interviews with a sample of the youths served and their families, at termination and at 6 weeks after termination of the project, an assessment will be made of the kinds of impact the projects had on the clients served.

Findings: A process analysis of project operations has resulted in information on the variety of strategies used to work with runaway youths and other youths in crisis, as well as the major problem encountered by the staff of runaway houses in meeting the needs of youths who seek their services.

Duration: October 1977-December 1978.

Cooperating group(s): Office of Youth Development, Office of Human Development Services, U.S. Department of Health, Education, and Welfare.

Publications: A series of final reports will be available from the Office of Youth Development.

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HEALTH SERVICES

41-SA-1 STUDY OF THE HEALTH AND GROWTH OF RURAL CHILDREN IN COSTA RICA

Investigator(s): Leonardo Mata, D.Sc., Professor and Director, INISA, University of Costa Rica, San Jose, Costa Rica.
Purpose: To study the health and growth of rural children in Costa Rica.
Subjects: Girls and boys, ages 0 to 8.
Methods: This is a prospective study. Intervention and multiple statistical treatments will be employed.
Duration: September 1976-September 1982.
Cooperating group(s): Ministry of Health, Costa Rica.

41-SA-2 WASHTENAW COUNTY HEALTH STUDY

Investigator(s): William Horvath, Ph.D.; and T.E. Dielman, Ph.D., Associate Research Scientists, Health Services Research Center, University of Michigan, Ann Arbor, Michigan 48109.
Purpose: To determine the relationships among health information, beliefs, attitudes, behavior, and status of parents and children; and to investigate the effects of various health interventions on those variables and their interrelationships.
Subjects: 1,250 adults and 250 children representing a multistage probability sample of residents of Washtenaw County, age 6 and over.
Methods: Household surveys are being conducted with the possibilities of randomly selected controls matched by segment.
Duration: October 1977-continuing.
Cooperating group(s): (1) National Center for Health Services Research; Health Resources Administration; Public Health Service; U.S. Department of Health, Education, and Welfare. (2) Several University of Michigan and Washtenaw County special interest groups.
Publications: A final report will be submitted to the National Center for Health Services Research.

41-SA-3 ADOLESCENT HEALTH AND HEALTH SERVICES

Investigator(s): Helen M. Wallace, M.D., M.P.H., Professor and Chairman, Division of Family Health; and Antonio S. Medina, M.D., M.P.H., Associate Research Physician, Department of Social and Administrative Health Sciences, School of Public Health, University of California, Berkeley, California 94720.
Purpose: To examine objective evidence of health problems, self-reported health problems, and attitudes toward health care; to determine the availability of health services for adolescents in a defined geographic area and compare them with needs by age, race, and socioeconomic status; to explore attitudes of adolescents toward different ways of providing health care; and to determine optimum methods of providing primary health care to adolescents on the basis of subjective and objective health needs and the attitudes of this group.
Subjects: 400 adolescents, ages 12 to 17, of both sexes, residing in Alameda County, California.
Methods: Arrangements were made with a nationally recognized research corporation to locate (using random digit dialing) a random sample of 400 adolescents from Alameda County. The adolescents were invited to participate and were given $10 to complete a health-related questionnaire and to undergo a comprehensive health assessment. Five health agencies in Alameda County

signed agreements to take health histories and make health assessments, at which time the adolescents also completed a questionnaire on attitudes and health knowledge. Six data collecting instruments have been developed: four for the health history and health assessment, one for a survey of health facilities, and one for a survey of providers of care (clinics and physicians' offices). A sample of providers of care was selected and will be contacted. A survey of health facilities will also be made.

Duration: November 1977-June 1979.

Cooperating group(s): Division of Research, Maternal and Child Health Services; Bureau of Community Health Services; Health Services Administration; Public Health Service; U.S. Department of Health, Education, and Welfare.

41-SA-4 HEALTH OF CHILDREN IN HAWAII

Investigator(s): Thomas A. Burch, M.D., M.P.H., Chief, Research and Statistics Office, Hawaii State Department of Health, P.O. Box 3378, Honolulu, Hawaii 96801.

Purpose: To answer questions about the health of children in Hawaii; and to evaluate health programs.

Subjects: A random sample of households throughout the State of Hawaii consisting of approximately 6,000 households per year; and all vital records in the state.

Methods: Cross-tabulations were conducted by age, sex, race, and other parameters with various health indices, conditions, disabilities, socioeconomic factors, etc. The data were evaluated by various statistical methods for assessing and evaluating the health status, health problems, and health trends in various subgroups of the populations.

Duration: 1969-continuing.

Cooperating group(s): State of Hawaii.

Publications: (1) Income of families with children under age 17. Research and Statistics Report, May 1978. (2) The relationship between short pregnancy interval and neonatal death in Hawaii, 1968-1975. Research and Statistics Report, August 1977. (3) Magnitude of sudden infant death syndrome in Hawaii. Research and Statistics Report, May 1976. (4) Children in Hawaii: An analysis of some sociodemographic characteristics from Hawaii health surveillance data, 1972-1974. Research and Statistics Report, February 1976. (5) Pregnancy and divorce in 15- to 18-year old brides in Hawaii. Research and Statistics Report, May 1974. (6) Infant mortality in Hawaii, 1968-1971. Research and Statistics Report, January 1974. (7) Infant mortality in Hawaii, 1966-1969. Statistical Report, 1970.

41-SD-1 CHILD DEATHS IN NEW JERSEY: SOCIAL CHARACTERISTICS

Investigator(s): Charles J. Crowley, M.A., Program Development Specialist, Bureau of Research, Division of Youth and Family Services, 1 South Montgomery Street, Trenton, New Jersey 08649.

Purpose: To determine the cause of death of children who had been under the supervision of the New Jersey Division of Youth and Family Services (DYFS), a statewide social services agency which serves about 55,000 children; and to compare these deaths with all child deaths in the state.

Subjects: 1,457 children, ages 8 days to 17 years, who died in 1974 in New Jersey (59% male, 41% female). Of these children, 68 were under DYFS supervision.

Methods: Data were obtained from the Division of Youth and Family Services, the State Health Department, and the Office of the Medical Examiner. These records were case records, death certificate data, and medical examiner's reports. Records were matched and comparative statistics and cross-classifications were developed.

Findings: Among 68 children who died while under DYFS supervision or who were under supervision at some time prior to their deaths in 1974, 18 of 68, or 26.4%, of the deaths were caused by accidents in the home. This compares with 142 of 1,457, or 9.7%, for all deaths in the population

of children, ages 8 days to 17 years in 1974. One-half of the DYFS supervised children's deaths in 1974 were caused by: home accidents, homicides, undetermined traumas, sudden or unknown causes, and suicides. These causes of death account for 18.5% of the 1,457 child deaths in the state in the same period. Most child deaths reported to New Jersey's Central Registry of Child Abuse and Neglect Cases were not known to the DYFS prior to their deaths. In these cases, the siblings, if any, were usually placed under supervision. Case materials for the 68 DYFS supervised children examined in the research revealed that abuse and neglect are contributing factors in deaths, but that these factors are obscured in the formal cause of specified internal death statistics. Fire, for example, is stated as the cause of death on the death certificate; the facet of child neglect in which a 4-year-old girl was left unattended by her mother might alter perceptions about what can be done to prevent child deaths from fire. In several New Jersey cities, the infant mortality rates are double and even triple the rates of the more fortunate areas. A reduction of the State's infant death rate to that experienced by Bergen County, the county with the lowest rate, would have meant a reduction in the number of infant deaths from 1,513 (in 1974 figures) to about 1,155. The reduction of infant mortality to this level and below is well within the capacity of the State's health and human services system. Case materials are reviewed that indicate that medical neglect is a significant element in some deaths attributed to pneumonia. Accidents were found to be the major cause of child deaths in the population ages 1 to 18. Home accidents claimed the lives of 80 children ages 1 to 5 in New Jersey in 1974.

Duration: July 1976-completed.

Cooperating group(s): (1) Office of the Chief Medical Examiner. (2) New Jersey Department of Health.

Publications: A report, Child deaths in New Jersey: Social characteristics, is available from the Bureau of Research, Division of Youth and Family Services.

41-SE-1 CONTRACEPTIVE SERVICES FOR ADOLESCENTS

Investigator(s): J.D. Forrest, Director of Research; Joy G. Dryfoos, M.A., Fellow and Director of Planning; and Toni Heisler, B.A., Research Associate and Project Coordinator, Alan Guttmacher Institute, 515 Madison Avenue, New York, New York 10022.

Purpose: To document and analyze contraceptive services for teenagers and the use of the services.

Subjects: Family planning clinic patients under age 20.

Methods: Data were collected from most of the family planning clinics in the United States. An analysis was conducted of clinic records on patient characteristics and aggregation at the county level. A comparison was made of the need for teen-age services and services for adult women.

Findings: In 1975, 1.2 million of 4.1 million sexually active teen-age women were receiving contraceptive care from organized family planning programs. The programs that were effective in serving older women were also effective in serving teens.

Duration: 1977-completed.

Publications: ***Contraceptive services for adolescents: United States, each state and county.*** New York: The Alan Guttmacher Institute, 1975.

41-SF-1 PARENT-INCLUSIVE PEDIATRIC UNITS: A SURVEY OF POLICIES AND PRACTICES

Investigator(s): Carol Hardgrove, M.S., Associate Clinical Professor, School of Nursing, University of California, San Francisco, California 94143.

Purpose: To survey the policies and practices of parent-inclusive pediatric units.

Subjects: 84 general hospitals that had parent-inclusive pediatric programs.

Methods: In a nation-wide survey of hospitals, innovations and restrictions were identified in parent policies and practices. Questionnaires were mailed to the directors of nursing services of 84 general hospitals and children's hospitals identified through the first survey as encouraging parents to live in. The 40-item questionnaire surveyed four areas of information: (1) general information on the unit; e.g., who is responsible for the parent inclusive program, special training they had received, how long the unit had been in operation, funding sources, etc.; (2) services available to parents and how they are informed of them; (3) ways families are encouraged to nurture their children physically and psychologically; and (4) guidelines established to promote optimum effectiveness in parent and staff interaction with the patient and with each other.

Findings: Responses indicated that parents are provided with a place to sleep but infrequently are offered additional facilities, services, and guidance necessary to optimize their presence on the parent-inclusive pediatric unit. Restrictions on parents remaining with their children are common during highly stressful procedures. Results indicate a gap between research on the importance of parental presence and current hospital practice.

Duration: 1973-completed.

Cooperating group(s): Biomedical Research Support Grant.

41-SG-1 **LONGITUDINAL COMMUNITY WIDE STUDIES OF THE ANTECEDENTS AND CURRENT FACTORS ASSOCIATED WITH CHILD AND ADOLESCENT MENTAL HEALTH AND DRUG USE**

Investigator(s): Sheppard G. Kellam, M.D., Professor, Department of Psychiatry; and Director, Social Psychiatry Study Center, University of Chicago, 5811 South Kenwood Avenue, Chicago, Illinois 60637.

Purpose: To determine how early social adaptation and psychological well-being relate to each other, in the context of the family and classroom, to inhibit or enhance adolescent mental health and drug use from the beginning of school or midadolescence.

Subjects: Total populations of children from the Woodlawn area of Chicago in 1st grade during the 1960's; and a 10-year follow-up of the entire 1966-67 sample of 1st grade children and their families (N = 1,242).

Methods: Systematic, quantified measures were used to assess (1) the child's social adaptational status in 1st grade, in 3rd grade, and at age 16 to 17; which included teacher observations, readiness, and intelligence test scores and grades; (2) mother's reports of her child's social development in 1st grade and at age 16 to 17; and (3) the child's drug use, antisocial behavior, and the extent and quality of social involvement. Extensive data on family characteristics were obtained in 1st grade and at the follow-up. These data concerned structure, social interaction, and psychological atmosphere aspects of the family.

Findings: There appear to be strong antecedents in 1st grade of teen-age drug use as well as psychological well-being. These patterns are much clearer for boys than for girls. Shyness and aggressiveness in 1st grade, both coupled almost always with learning problems, are associated in quite contrasting fashion to drug use in adolescence. Shy 1st graders grow up to use drugs much less, while aggressive 1st graders are the heaviest drug users 10 years later. Learning problems in 1st grade, with or without shyness or aggressiveness, were associated with lower psychological well-being in the teen-age years. Again, these results hold mainly for boys. Girls appear to have much less continuity over these years and a much less clear pattern of their antecedents of adolescent outcomes.

Duration: October 1973-continuing.

Cooperating group(s): (1) University of Chicago. (2) Woodlawn Mental Health Center Community Board. (3) Chicago Board of Health. (4) Chicago Board of Education. (5) National Institute of Mental Health; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of Health, Education, and Welfare. (6) National Institute on Drug Abuse; Alcohol, Drug Abuse, and Mental Health Administration; Public Health Service; U.S. Department of

Health, Education, and Welfare. (7) National Institute of Child Health and Human Development; National Institutes of Health; Public Health Service; U.S. Department of Health, Education, and Welfare.

Publications: Papers and information on the study are available from Social Psychiatry Study Center, 5811 South Kenwood Avenue, Chicago, Illinois 60637.

41-SG-2 RIGHTS OF ADOLESCENTS IN THE MENTAL HEALTH SYSTEM

Investigator(s): John P. Wilson, LL.B., Associate Dean; and Henry A. Beyer, J.D., Research Coordinator, Boston University School of Law, 765 Commonwealth Avenue, Boston, Massachusetts 02215.

Purpose: To explore the legal rights of adolescents to receive, or refuse to receive, mental health treatment; and to explore conflicts between adolescents, parents, and the state.

Subjects: Traditional ***listed*** and nontraditional ***unlisted*** providers of mental health treatment in Massachusetts.

Methods: The emphasis of the project was placed upon the rights of mentally ill adolescents subjected to voluntary admission, primarily during the process of admission and during treatment. A questionnaire survey was conducted regarding access to treatment, parental consent, confidentiality, and other related aspects. A model set of procedures for protecting adolescents subjected to voluntary admission was constructed.

Duration: June 1973-completed.

Publications: ***Rights of adolescents in the mental health system.*** Lexington, Massachusetts: Lexington Books Division, D.C. Heath & Company, 1978.

41-SH-1 LEAD IN ENAMEL AND SALIVA, DENTAL CARIES, AND THE USE OF ENAMEL BIOPSIES FOR MEASURING PAST EXPOSURES TO LEAD

Investigator(s): Finn Brudevold, Ph.D., Head; and R. Aasenden, Ph.D.; and B.N. Srinivasan, Ph.D., Associate Staff Members; and Y. Bakhos, B.S., Chemist, Biochemistry and Preventive Dentistry, Forsyth Dental Center, 140 Fenway, Boston, Massachusetts 02115.

Purpose: To compare the concentrations of lead in surface enamel and in saliva with caries prevalence; and to explore the possibility of using lead in enamel and in saliva as measures of past and present exposure to lead.

Subjects: 251 children, ages 9 to 12, from Cambridge, Massachusetts; including 123 boys and 128 girls plus two adults and five infants, four of whom were hospitalized for lead poisoning.

Methods: Enamel biopsies were taken from the maxillary central incisor of each subject by etching of about 2 μm of enamel with 0.5 M HCL containing 70% glycerol. About 1 ml of whole unstimulated saliva was collected from each subject in a plastic tube and from the infants by means of a plastic syringe. Stimulated saliva was obtained with a modified Carlson-Crittenden device. Blood samples were taken and analyzed by the Massachusetts Department of Public Health. Biopsies were analyzed for calcium, lead, and fluoride; saliva, for lead. Caries examination was done with a mirror and probe. No X-rays were taken.

Findings: The biopsies ranged in lead from 170 to 5920 ppm and in depth from 0.6 to 3.5 μm. The concentration gradient of lead in the outermost enamel was very steep. Older children have lower biopsy concentrations than younger children and no significant posteruptive uptake. The lead in whole saliva ranged from 6 to 320 ppm.

Duration: April 1976-completed.

Cooperating group(s): Massachusetts Department of Public Health, Childhood Lead Poisoning Prevention Program.

Publications: ***Journal of Dental Research,*** November 1977.

41-SH-2 CHILDHOOD LEAD, PYRIMIDINES, AND METABOLIC DEBRIS

Investigator(s): Carol R. Angle, M.D., Professor, Department of Pediatrics, University of Nebraska Medical Center, Omaha, Nebraska 68105.
Purpose: To define, in a large-scale childhood lead poisoning program, the biochemical significance of the inhibitory effect of lead on red cell pyrimidine 5′-nucleotidase (P5N) and its molecular relevance to globin synthesis.
Subjects: Preschool girls and boys, ages 2 to 5, identified and followed in the Omaha Childhood Lead Poison Program.
Methods: The correlation of blood lead levels of children with red cell P5N and cytidine is being assessed. An ***in vitro*** assay of the effect of cytidine and P5N deficiency on α and β chain globin synthesis will be conducted.
Duration: April 1978-March 1980.
Cooperating group(s): Omaha Childhood Lead Poisoning Control Program, Omaha-Douglas County Health Department, Division of Environmental Health.

41-SH-3 SAFE ENVIRONMENTS FOR THE DEVELOPMENTALLY DISABLED

Investigator(s): John V. Fechter, Jr., Ph.D.; and Ann M. Ramey-Smith, M.A., Eng. Res. Psychologists, National Bureau of Standards, Washington, D.C. 20234.
Purpose: To determine the activities and behaviors characteristic of residents of group homes for the developmentally disabled; to locate published information about the adaptive behavior of this population; and to collect information about the anthropometric, biomechanical, and physical disabilities that could apply to improved fire protection.
Subjects: Nine group homes for developmentally disabled children now in operation.
Methods: Group home counselors or houseparents summarized (for 1 week, 24 hours a day, in 30-minute intervals) the activities carried out in each room and reported the number of residents included in the activities. Fire drill (evacuation) times were recorded for each home during site visits.
Duration: August 1977-August 1978.
Cooperating group(s): Developmental Disabilities Office; U.S. Department of Health, Education, and Welfare through the Center for Fire Research, National Bureau of Standards.

41-SH-4 CHILDHOOD ACCIDENT BEHAVIOR

Investigator(s): D. Bruce Gardner, Ph.D., Professor, Department of Child Development, Colorado State University, Fort Collins, Colorado 80523.
Purpose: To establish the nature of developmental trends in childhood accidental injuries; to develop procedures for conducting laboratory/experimental studies of accident behavior in children, without risk of injury; and to test specific hypotheses on childhood accident behavior that arise from the knowledge of injury statistics.
Subjects: A continuing series of experiments is anticipated with children, ages 3 to 15. No special populations are required. In preliminary work, 3,916 children, ages 0 to 15, treated in hospital emergency rooms in 1977, have provided statistical basis for clear developmental trends. These cases are now in a permanent computer file by age, sex, injury type, body site, agent, and date of injury.
Methods: For the preliminary descriptive effort, data have been provided by Colorado hospital emergency room logs. The clear developmental trends in injury type, body site, agent, etc., provide a basis for generating hypotheses for experimental testing. Laboratory experimentation involves simulated high risk environment, in which elements of the environment are moved, displaced, upset, or damaged without risk of injury to the child. The child's behavior in the experimental

room is recorded with high speed motion picture photography. A series of specific treatment conditions is planned to observe their effects on accident behavior and risk-avoidance behavior, and to determine the amenability of risk-avoidance behavior to modification. Relationships between laboratory risk-avoidance behavior and ***in vivo*** accident history of the child is targeted for investigation, as well as relationships of these to home and family variables.

Findings: Only descriptive material on injury patterns, by age and sex, are available to date. These provide compelling evidence that childhood injuries follow a developmental pattern with respect to injury type, body site involvement, agent involvement, and distinctive patterns for boys vs. girls. The ratio of male/female children treated in Colorado approximates 60/40.

Duration: January 1978-continuing.

Cooperating group(s): Colorado State University Grant.

Publications: Gardner, D.B. Childhood accidental injuries treated in Colorado hospital emergency rooms. Mimeo. Fort Collins, Colorado: Colorado State University, 1978.

INSTITUTION INDEX

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OTHER ABSTRACTING JOURNALS AND SERVICES

Abstracts of Hospital Management Studies (quarterly), the Cooperative Information Center of Hospital Management Studies, University of Michigan, 220 East Huron Street, 419 City Center Building, Ann Arbor, Michigan 48108.

Abstracts on Criminology and Penology, Criminological Foundation, Rapenburg 38, Leiden, The Netherlands.

Chicago Psychoanalytic Literature Index (quarterly). Institute for Psychoanalysis, 180 North Michigan Avenue, Chicago, Illinois 60601. Annual subscription: $50 postpaid ($55 outside U.S.).

Communication Disorders, Information Center for Hearing, Speech, and Disorders of Human Communication, The Johns Hopkins Medical Institutions, 310 Harriet Lane Home, Baltimore, Maryland. 21205.

Current Awareness Service (monthly), the Institute for Research into Mental and Multiple Handicap, 16 Fitztroy Square, London WIP 5HQ, England. The service provides a listing of newly published journal articles; new books are listed every 2 months; and there is a monthly guide to forthcoming professional meetings in the field. Request a Publications List from Denise McKnight, Information Officer.

Current Index to Journals in Education (monthly), Macmillan Information, A Division of Macmillan Publishing Corporation, Inc., 216R Brown Street, Riverside, New Jersey 08075.

Dissertation Abstracts, University Microfilms, Ann Arbor, Michigan 48103. (Gives synopses of U.S. doctoral dissertations with an annual index.)

dsh Abstracts, Deafness, Speech and Hearing Publications, Gallaudet College, Washington, D.C. 20002.

Educational Resources Information Center (ERIC) supplies current research and research-related information to teachers, administrators, researchers, commercial organizations, and others. ERIC includes 16 clearinghouses or documentation centers, located at universities and other institutions throughout the country. Each clearinghouse concentrates on a different subject matter area in the field of education. For complete information, write: Director of ERIC, National Institute of Education, Office of Dissemination and Resources, Washington, D.C. 20208.

ERIC Clearinghouse on Early Childhood Education, Publications Office, 805 West Pennsylvania Avenue, Urbana, Illinois 61801, publishes a quarterly newsletter; subscription, $2.00. Also available free, a List of Publications relating to children, ages 0 through 12.

Exceptional Child Education Abstracts (quarterly), The Council for Exceptional Children, Box 6034, Mid City Station, Washington, D.C. 20005.

Excerpta Medica Foundation, New York Academy of Medicine Building, 2 East 103rd Street, New York 10029, and 119-123 Herengracht, Amsterdam C, The Netherlands, has established an abstracting service on pediatrics, available on a yearly subscription basis. In addition to abstracts, the Foundation provides to subscribers, at cost, photocopies and translations of complete articles.

Health Economic Studies Information Exchange, Division of Medical Care Administration, Public Health Service, Washington, D.C. 20402.

Index Medicus, National Institutes of Health. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Language and Language Behavior Abstracts (quarterly), Center for Research on Language and Language Behavior, University of Michigan, Ann Arbor, Michigan 48104. Order from Subscription Manager, LLBA, Meredith Publishing Co., 440 Park Avenue South, New York, New York 10016.

National Bureau of Child Welfare Library (Voor Kinderbescherming), Stadhouderslaan 150, The Hague, The Netherlands, publishes abstracts of articles in the field of child welfare each month. The articles are in Dutch, but those familiar with the Universal Decimal System would be able to understand something about the articles. The subscription rate for documentation on cards is 30 guilders (approximately $8.40).

Nutrition Abstracts and Reviews, Commonwealth Bureau of Animal Nutrition, Bucksburn, Aberdeen AB2 9SB, Scotland.

Poverty and Human Resources Abstracts (bimonthly), Institute of Labor and Industrial Relations, University of Michigan-Wayne State University, P.O. Box 1567, Ann Arbor, Michigan 48106.

Psychological Abstracts, American Psychological Association, 1333 – 16th Street, N.W., Washington, D.C. 20036.

Rehabilitation Literature, National Easter Seal Society for Crippled Children and Adults, 2023 West Ogden Avenue, Chicago, Illinois 60612.

Research in Education (monthly), Computer Microfilm International Corporation, P. O. Box 190, Arlington, Virginia 22210.

Science Information Exchange, Smithsonian Institution, 209 Madison National Bank Building, 1730 M Street, N.W., Washington, D.C. 20036 provides to qualified investigators, for a fee, selected abstracts of current research supported by foundation or government grants. The exchange covers such fields as medicine, nursing, public health, nutrition, psychology, education, anthropology, mental health, and intercultural relations.

Sociological Abstracts, 15 East 31st Street, New York, New York 10016.

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The Administration for Children, Youth, and Families; Office of Human Development Services; U.S. Department of Health, Education, and Welfare has funded the ***RRC*** staff to collect and disseminate information on current research relating to children and their families. The purpose of ***RRC*** is to inform researchers and others concerned with research in child life of current and ongoing research projects.

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Report studies ***in progress*** that:

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studies already published in sources generally available in major libraries

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